Minnesota Medicine

Journal of the Minnesota State Medical Association, Southern Minnesota Medical Association, Northern Minnesota Medical Association, Minnesota Academy of Medicine and Minneapolis Surgical Society

Volume 33 AUGUST, 1950 No. 8

A BETTER RURAL TRANSFUSION PROGRAM

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THE RURAL SURGEON visiting the larger medical and surgical centers looks with envy upon the unlimited supply of blood available to insure safety, speed convalescence and extend the range of surgical effort. He, too, needs blood to treat traumatic shock and hemorrhage, bleeding peptic ulcer, ectopic pregnancy and obstetrical blood losses, as well as for preparing his anemic patients more promptly for elective surgery. He often hopes that somehow the advantages of a blood bank may be brought to the small town hospital where he works.

The problem in closely spaced urban centers differs from that where smaller groups of people are separated by long distances or geographic barriers at times aggravated by inclement weather. The solution must be planned to fit the terrain to which it applies, and this paper will describe the program we have worked out in a typical, average small town in Minnesota.

Our village of 3,000 people, about 120 miles north of Minneapolis, serves an agricultural population of about 12,000 within a radius of 15 miles. Our twenty-three-bed hospital, soon to be replaced by a new one about twice its size, is well equipped and served by an excellent medical and nursing staff. All types of medical, obstetric and surgical emergencies are handled. The more common types of major surgery are taken care of locally, while the rare and more specialized cases of a non-urgent nature are referred to specialists in the Twin Cities or Rochester. A consulting pathologist furnishes prompt tissue diagnosis and helpful discussion of our surgical and autopsy specimens. He takes an active interest in our laboratory and administrative problems, and our blood banking plan was first suggested by him during one of our periodic conferences.

Until this year our solution of the blood problem has followed a pattern common to most small town hospitals. When the need for blood was anticipated in non-emergency cases the friends and relatives were examined, grouped and cross-matched and the blood drawn and refrigerated until needed. A "walking blood bank" was organized several years ago. The information on group, Rh, hemoglobin, physical fitness, history, serology, address and phone number of each volunteer was filed and cross indexed. From this list a donor could be obtained, the blood drawn and cross-matched within a reasonably short time to meet the need for blood in emergencies. Plasma from commercial sources and other parenteral fluids were used while waiting for the blood. Although this scheme had worked well and had saved lives in dramatic fashion, it could nevertheless be improved upon.

Accidents and emergencies occur at night, on Sunday and on holidays when the technical team trained to carry out the procedure in efficient and orderly fashion is not on duty. Delay in assembling personnel and substitution of less experienced people results in the loss of critically important time. Donors may be hard to locate and often are not properly prepared. They may have eaten recently. Serology may be too old to be reliable. The commercial plasma used to control the situation until blood becomes available is expensive and the Blue Cross does not cover

To be read at the third annual meeting of the American Association of Blood Banks, Chicago, Illinois, October 12-14, 1950.

its cost. Impecunious patients need blood and plasma as often as the wealthy. The lavish use of expensive materials adds to the already heavy financial burden of the hospital. Nevertheless, it is our moral obligation to meet the needs of the sick and injured without regard to their ability to pay. The soul-searching reconsideration of the case that might have been saved had plasma and blood been more readily available has its effect upon the doctor's peace of mind and perhaps on his coronary arteries as well. It was obvious to the medical group of our community that an improvement upon our old transfusion habits was urgently needed.

In addition to the high cost of commercial plasma, another obstacle to the successful operation of a small hospital blood bank is the inability to predict the need for blood in any given short period of time. On some occasions a dozen bloods might be used in a single night, while at another time no blood may be required for many days and the entire refrigerated supply wasted through too long storage.

Elements of an Ideal Rural Transfusion Program

An ideal transfusion program in a small hospital requires three provisions in addition to the ordinary procurement of blood for elective transfusion:

1. There must be available an adequate supply of plasma which the physician can use in emergency without any hesitation about the patient's ability to pay.
2. There should be a moderate supply of fresh whole blood drawn and ready for administration in emergencies as soon as the patient can be grouped and the blood matched.
3. There must be a volunteer "walking blood bank" which can be activated whenever the situation indicates that the reserve of plasma and refrigerated whole blood might be exhausted.

The community must be locally self sufficient so that this program is in effect continuously, and cannot be disrupted by storms, sleet and other conditions which might interfere with the delivery of blood from a distant point. It is true that such a program requires attention and effort on the part of the medical staff. The program is vital to them and it is only proper and wise for them to give enough of their time to supervise and retain control of this phase of their medical practice.

During a discussion of these problems our consulting pathologist, Dr. R. W. Koucky, suggested that we contact the Minneapolis War Memorial Blood Bank. In conjunction with Dr. G. A. Mattson, the director of this bank, the Long Prairie Community worked out the program which I wish to outline.

The Long Prairie Plan

With the able help of the *Long Prairie Leader* and its public spirited editor, Mr. Carl C. Carlson, a planned campaign of publicity was used to initiate the program. The community problem and the proposed solution were repeatedly emphasized. A goal, both as to numbers and as to closing date, was set. The total, to date, and the names of new volunteers were published each week. Requirements for, and contraindications to, donation were printed to minimize the number of rejected prospective donors. In a surprisingly short time, hundreds of citizens had called to give their names, addresses and telephone numbers, and to receive appointments for screening examination and donation.

Our technician, Mrs. Dorothy Robertson, spent a few days at the Minneapolis War Memorial Blood Bank, and received there instruction in the meticulous methods of screening, registration, collection, preparation, storage and shipment required to meet the exacting standards of the National Institute of Health.

Finally, the plan received its auspicious start on the appointed day in February, 1950, when fifty donors were screened, registered, and made their donations. Dr. G. A. Mattson, director of the Minneapolis War Memorial Blood Bank, came to Long Prairie for the occasion and brought with him an extra registrar and technician from his staff, both to insure that the initial effort would go off smoothly and to satisfy himself that his standards and those of the National Institute of Health were met. Fifty flasks of citrated blood were soon on their way to the Minneapolis bank in specially refrigerated hampers, and within a few days twenty-five units of irradiated plasma were on hand at the hospital.

The Long Prairie community had been offered

two alternatives. We could send our blood to be converted into plasma at a fixed cost per unit, or we could receive one unit of plasma for each two units of blood sent, without any other cost. We chose the latter plan because for our community it seemed simpler and more practical. It enables us to furnish all the blood and plasma needed, to those volunteers who have established membership by blood donation, without monetary cost to them.

Since opening day, six or more bloods have been drawn each week. Our aim is to keep on hand enough blood to serve the needs of any ordinary emergency. Three or four group O bloods, together with whatever happens to come in among the less common groups, form a small reserve instantly available, and serve in other ways to exchange with and supplement the bloods drawn during that week for elective transfusion. We do not hesitate to use group O blood for emergency recipients in other groups, with the addition of the Witebsky substance, provided the donor's cells are not agglutinated in the recipient's serum.

The unused bloods, or those taken in exchange, are shipped to the Minneapolis War Memorial Blood Bank each week. Our credit there may be used to provide blood for Long Prairie patients referred to hospitals in the Twin Cities, to the Veterans Administration or University hospitals, to Rochester or Duluth, or even for Long Prairie travelers in such distant places as Seattle or Miami. This credit will also be used to provide additional plasma and such special preparations as washed cells, packed red cells or bloods of unusual group, which we may wish to order from the central blood bank.

Now, six months after its start, the local blood bank has become almost self-sustaining. Only occasionally is the community called upon to make a few more voluntary donations.

Patients who have previously donated blood to the community project are entitled to receive blood or plasma without making any replacement. Those patients who did not previously contribute, and who now receive blood or plasma from the bank, must make a replacement. They replace one unit of blood for each unit of blood received, and two units of blood for each unit of plasma received from the bank. Those who fail to make their replacement of blood must pay for it at the standard commercial rate. To make a replacement, the required number of donors are given appointments on our schedule, and as soon as the blood is collected the charge is cancelled. The blood thus received as replacement helps keep the bank solvent, and the cash paid for blood and plasma not replaced is used to defray the few incidental expenses of the bank.

Since we have had blood and plasma so readily available, we have used it so freely that we now wonder how we ever got along without our blood bank. Doctors and patients alike appreciate the convenience and safety made possible by this community project. The virtually unlimited supply of plasma, the buffer of fresh whole blood and the privilege of calling on the central bank for rare blood types, typing sera, washed red cells and consultation on our transfusion problems, has proved invaluable to us.

We are proud that this has been accomplished without help from either governmental or charitable organizations and has been done without adding to the financial burden of our hospital, our patients or our community.

It is possible that this type of program will soon be instituted in other communities within our section of the state, and that through a co-ordinated system of exchange directed through a central supervising agency, such as the Minneapolis War Memorial Blood Bank, still greater safety and convenience will be provided for the hospitals, patients and doctors of our area.

HEALTH AND DISEASE

Little attention is paid to health, and it is often considered in the negative sense of absence of disease. It is challenging to current thought to point out that health and disease are not static entities but are phases of life . . . Health, in a positive sense, consists in the capacity of the organism to maintain a balance in which it may be reasonably free of undue pain, discomfort, disability, or limitation of action including social capacity.—JOHN ROMANO, M.D., *J.A.M.A.*, June 3, 1950.

PSYCHOLOGICAL MEDICINE IN A GENERAL MEDICAL SETTING

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ONE of the phenomena of contemporary medicine is the upsurge of psychiatry. Some doctors feel that psychiatry is, if anything, too popular, and few will doubt that the pendulum of opinion, at least with regard to some lay thinking, has swung past dead center in appraising the accomplishments and promises of psychiatry, and that time will see further shifts in this opinion.

In medical thinking, too, more time will pass before psychiatry's ultimate place as a medical specialty will have stabilized, and also before the contributions of psychiatry which are applicable to general medicine have been sorted and winnowed by experience and integrated into the general practice of medicine. In this second regard, psychiatry can be thought of not as a medical specialty, but almost as a basic science—a basic science which for want of another name might be called psychological medicine or the human approach.[20]

My subject is not what psychiatry's niche as a medical specialty may ultimately be, but is rather how psychiatry can contribute to, and psychiatric information be integrated into general medical practice.

Much of what has been said on this question is speculative, since usually those physicians who are most conversant with psychiatry have had little opportunity to apply this in the practice of medicine, and, to some extent, the converse is true.

I am going to use my experiences in the University Hospitals Medical Clinic during the past year as a basis for discussing this question. But there are obvious difficulties to drawing any very dogmatic conclusions on this basis. For one thing, a year is not a very long time. Moreover, an analysis of one's own work is apt to be rather subjective, and the fact that the factors we are analyzing are subtle doesn't make it any less so. Furthermore, while the Medical Clinic is the closest approach we have in this institution to the actual practice of medicine, it is not entirely comparable to the practice of medicine as I have known it at least. For example, the case load there is heavily weighted by special problems referred to the University, such as cataracts, malignancies, and prostatism. Then, too, we don't, as a rule, know as much about our clinic patients as the family doctor does. My findings in the Medical Clinic are therefore not precisely comparable to what might happen in practice.

While I am talking about difficulties in presenting the subject, there are two other points that ought to be made. In this day of the popularization of psychiatry, of psychoanalytically tinged comic strips and movies, and when the term psychosomatic has become a household byword, we all have had to develop ideas (one might almost say convictions) about the role of emotions in the genesis of disease and about the psychological aspects of treatment. As far as I have been able to tell, everybody has developed a different philosophy about this, and one of the difficulties in discussing the subject is that I am confronted by almost as many different points of view as there are readers of this article.

To some of us, psychiatric pronouncements in this regard seem a little fantastic and slightly improper. Others are prone to rather uncritically accept psychiatric theorizing and are in this sense "more Royalist than the King." To most of us some of the psychiatric inferences drawn from behavior touch too close to our inner feelings for us to be entirely able to view the ideas objectively.

One other thing which makes a discussion of this subject difficult is the extent of the "psychological dimension" in practice. As Menninger said, discussing "emotional factors" in medicine "is comparable to a discussion of chemical factors"[10] in medicine.

When I started working in the Medical Clinic a year ago after a little better than two years in psychiatry and neurology, I had the usual misgivings about what I had forgotten in medicine.

I wish particularly to express my indebtedness to Dr. Robert D. Mooney of Saint Paul with whom I share an interest in this aspect of medicine. He and I have discussed this subject so extensively that it is impossible for me to tell where my ideas leave off and his begin.

Acknowledgment is also made to Drs. Donald W. Hastings, Cecil J. Watson, C. Knight Aldrich, and the staff of the Medical Clinic for their support.

This article appeared in *The Bulletin of the University of Minnesota Hospitals and Minnesota Medical Foundation* for March 17, 1950.

I remember the near panic I experienced when I realized that I couldn't remember which lung had three lobes. However, I found, as others of you have with a similar experience, that what was forgotten quickly came back.

But these were not the only misgivings I had. There were in my own mind (and in the minds of the people with whom I had discussed this departure from the beaten path) questions as to just how what I had learned in psychiatry would apply in general practice. I intend to discuss my subject by restating those questions about whether what one can learn in psychiatry is applicable in medical practice and then giving the answers that have emerged in the Medical Clinic the past year. Before I do that, however, I think it would be wise to clarify a little what these things are that one can learn from psychiatry.

You are all familiar with some of the things which are learned in psychiatric training, such as the characteristics of behavior in the various psychoses, the procedures of insulin and electric shock. These things are associated with psychiatry as a specialty.

There are other skills and attitudes which psychiatry teaches for use in both its functions as a medical specialty and as a basic science, of which you are less apt to be aware.

For example, psychiatric training should bring an understanding of the limitations of psychiatry and a recognition that one's goals may have to be fairly modest. It must have been a psychiatrist who first said, "You can't make a silk purse out of a sow's ear." The student must come to recognize that bilateral far-advanced tuberculosis with cavitation of the psyche or carcinomatoses of the soul are far more frequent than their organic analogues, and he reluctantly comes to see that it is no more possible completely to remake the personality than it is to remake the body.

Furthermore, the student should get an awareness of unconscious motivations and thinking. Psychiatric training can equip the trainee with a working knowledge of this domain wherein appears to lie that majority of our thought processes of which we ourselves are completely unaware.

From this awareness of unconscious feelings comes an understanding of symbolism in thought and symptom. I am sorry I do not have more time to discuss this since it is hard to overestimate the importance of understanding unconscious feelings in understanding the "Language of Symptoms." In the few cases I am going to describe later I think the symbolic expression of unconscious feelings will be quite evident.

Another set of skills which are particularly difficult to explain, but which are especially pertinent to what we are talking about, are those which give the doctor clues as to what kind of a person the patient has been and what his present mental state is. This kind of skill has long been identified in medicine as "the Art of Medicine." All psychiatry has done here is to refine and bring up to a level of thought where we can talk about and study them, things which we have used intuitively for years.

It would be nice if the psychiatrist could carry with him a stethoscope especially designed for hearing emotional overtones. For one thing it might be easier for some of us to believe that he does hear the things he claims to. I am sure that I need not point out to you that the psychiatrists walk these halls unencumbered by such diagnostic appliances as stethoscopes, ophthalmoscopes, and without even a percussion hammer, although this is an heretical thought.

In the absence of such mechanical aids in diagnosis, the doctor must rely on his own senses to get an understanding of the patient's feelings. He must "listen with the third ear"[14] and read between the lines to catch the shades of feeling which are his clinical facts. It is well to remember that when we are dealing with another person in any face-to-face situation, there are many kinds of communication involved other than the words spoken. We can see things in a patient's posture, demeanor, and expression which speak eloquent volumes about him. Thus we learn, for example, how he feels about us and conversely, he divines whether we like him.

Lumped together in a structure called an "interview," these subtle skills compose the tools a psychiatrist carries about in his side pocket. Further, this is the equipment he uses in treatment as well as in diagnosis.

Now these points we have been considering are what we ask about when we raise questions as to how or to what extent psychiatric skills and knowledge can be incorporated into general medical practice.

One of the questions which was brought up when I was going to start in the Medical Clinic

a year ago was the question of time. Would it be practicable, simply from the standpoint of time, to include in the usual medical workup more than an intuitive assessment of the patient's personality and of his background? Moreover, again from the standpoint of time, would it be possible in ordinary medical therapy to go further in the treatment of patients than just to say, "You're nervous," "It's your nerves," or "There's nothing organically wrong with you. Go home and forget it"? Experience in the Medical Clinic clearly indicates that the answer to these questions is "yes."

It has been possible to practice this kind of medicine there and to carry a full clinic load without getting bogged down in any way. In fact in the Medical Clinic it has seemed to me that diagnosing and treating patients using the comprehensive approach is actually quicker than using other approaches. So what might at first glance be thought to be the long way around, appears to be the short way through. This is what we might expect since in every phase of medicine the quickest way to complete things is to get at the core of the difficulty.

The saving of time is especially evident when we are dealing with patients with functional complaints. We have all experienced the time-consuming chase of "will-o'-the-wisp" complaints upone diagnostic by-way and down another, only to wind up with nothing to show for our efforts but strained relationships with the patient. I am not suggesting that this comprehensive approach is going to obviate the "diagnostic impasse" we reach with such complaints, but it has been my experience that it has held the key to a surprising number of such situations. I would like to cite some recent cases to emphasize these points.

Case 1.—This patient, a forty-year-old unmarried schoolteacher, came in for a checkup complaining of tightness and drawing over the left precordium with radiation to the left shoulder and down the left arm to the hand. The pain was not clearly related to exertion and had been present intermittently for about two years. During this period the patient had not been working. Physical examination was normal except that the patient was manifestly depressed.

By picking up and following out clues in the manner I described earlier the following story was brought out. The patient indicated that she had thought she might have cancer of the breast. Indeed the manner in which she said this suggested that she might welcome that diagnosis.

At the time of onset of the present complaints two years before, the patient's mother had died of breast cancer. (In explaining this the patient gestured toward her own left breast.) At that time the patient had experienced a similar feeling of tightness in her left hand and in fact her left hand had been clenched for two weeks then so that she could not voluntarily relax it, but had to pry her fingers open with her right hand.

In her second visit to the clinic this patient was able with a little help to express some of the deep anger she felt toward her mother with considerable subjective and objective improvement. She remembered that three years before her mother had died, at a time when she herself had been sick with pneumonia, she had had thoughts of violence toward her mother and a young nephew living with her mother at that time. For years she had supported her mother, had in fact purchased a home for the mother, only to see the mother devote her substance and efforts to the care of her sons, who always came first. She spoke with deep feeling of the senseless beatings she had received as a girl while her stepbrothers got off with little more than a reprimand.

The patient had been placed in an orphanage twice in her childhood for a period of about a year each time. The first time was as a very young child when her father abandoned the family and the second was at the age of twelve when her stepfather died. During the patient's hospital stay with pneumonia, she looked forward to convalescing at home under the care of her mother. As she said, she had been counting on "getting close to mother at last" only to find when she got home that the mother's interests were centered in the nephew.

She explained her unemployment in the past two years by saying that she guessed she had just become "tired of being the breadwinner for the family."

Case 2.—This patient, a thirty-two-year-old mother of three, was first seen on the same morning as Case 1. Her complaints were superficially similar to Case 1 in that she also suffered pain in the left chest, shoulder, arm, and hand. On physical examination there was tenderness in these areas most marked over the left humerus. This patient also was obviously depressed. It needed no questioning or indirection to elicit from her a concern that she might have a cancer of the breast.

Her complaints dated back eight weeks to about the time when she had decided to divorce her husband. About one year previously her husband had beaten her severely on the left side of the body as she lay in bed.

She was also seen on one other clinic visit after the initial examination. During the second visit the almost overwhelming self-doubts and self-accusations she felt over many things in her life and especially over the divorce came out. She felt that it was somehow all her fault and brought forth a good many rationalizations as to why she shouldn't go through with the divorce. I suggested that she was really being rather unrealistic in taking on all the blame for this and that apparently she didn't really have a very good opinion of herself. I suggested further that perhaps one of the reasons she found the idea of divorce so disturbing was

that it only served to heighten her sense of failure and strengthen her inner convictions of her own unworthiness. Coincident with this discussion the patient's demeanor and expression changed. She became more relaxed and left saying she felt better already. The patient was seen again ten days later and to all intents and purposes was well.

Part of the concern which was felt about whether this approach would require too much time came from the assumption that psychological medicine was something that had to be done in addition to and separate from the rest of the doctor's job rather than right along with it. In Medical Clinic I learned again that a thorough medical workup of history taking and physical examination is the best routine way of establishing rapport. Similarly I learned that the opportunities for quick evaluation of personality are better in this setting than any other I know of. Consequently it has been interesting and gratifying to find that this kind of handling of emotional problems can be done almost with the back of one's hand and with an over-all saving of time to the physician. It can be done in an unobtrusive fashion wherein the patient is not entirely aware of what is happening and hence the usual resistance to psychiatric treatment does not arise.

The question of how much time it is going to take to practice medicine in this way depends in part on how deeply one goes in treating emotional problems. What I have been saying is that there is a level of psychotherapy other than that of a thorough "vacuuming and dredging of complexes"[1] which experience has thus far shown to be particularly effective in a general medical setting, and to which medical practice is peculiarly adapted.

This has a different but not necessarily inferior goal to that long-term, time-consuming, expensive type of therapy which has come to represent to some the *"sine qua non"* of psychiatric treatment. This level of psychotherapy can be compared to incision and drainage of an abscess with evacuation of the collection of emotional pus as its goal. In this treatment the physician not only drains the abscess but may help the patient avoid similar future accumulations of pus if the patient's own native powers of resistance do not appear adequate.

Oftentimes it is surprisingly easy to do this kind of psychotherapy. However, before I cite additional cases, I would like to digress a moment to emphasize that in handling emotional problems, as in other problems in medicine, we expect different patients to achieve varying therapeutic goals. One cannot expect a perfect or even satisfactory result in many cases here just as one cannot expect to restore certain cardiac cases to anything like full activity. Consequently, there is a lot of room in the handling of emotional problems for therapeutic conservatism and the light touch. It is well to avoid the error that Rogerson described as "unwise therapeutic push-fullness."[15]

I would like to use additional cases for illustration. These cases I am using are samples rather than selections or exceptions since a good portion of the patients coming to the Medical Clinic for their initial examinations present this kind of problem.

Case 3.—This patient was a middle-aged woman who in addition to slight anorexia complained of a constant right upper quadrant abdominal pain which was not related to food intake but tended to be accentuated by activity (in her case, usually housework). In response to a question as to what the pain made her think about she said that once years ago she had been kicked in that area by an adolescent daughter. The daughter had been a thorn in her side from her earliest years because of a convulsive disorder and as a behavior problem. The patient then indicated that she was waiting the daughter's return from the Cambridge Epileptic Colony where she had been treated for several years. Further it developed that on the day her abdominal pain started she had received a letter from this institution stating that her daughter was to be discharged to her home as it was felt that she could now make some sort of an adjustment outside of the institution.

Case 4.—This patient was a forty-four-year-old married woman, mother of ten children, who complained of palpitation and of numbness and stiffness of her hands and fingers. She first developed these symptoms in the summer of 1949. They came on one night when she was in bed nursing her two-months-old baby. At that time she became faint and felt as though she was losing consciousness. She suffered palpitation and her hands became numb and stiff. She described and demonstrated this to me by saying she felt she "couldn't close them together." Her husband was not living at home at the time except for weekends as he had taken a job in Minneapolis. Shortly before this episode the patient had learned of his affair with a woman in Minneapolis and had felt a burning resentment about it which she had largely been unable to express to him. While we don't really know the answer, the things I have told you and the rest of the evidence available indicated that this symptom portrayed this conscientious

mother's horrified repression of vengeful thoughts about her husband and/or their youngest child.

I have pointed out that uncovering and treating the psychological factors in these cases did not require any extra part of the doctor's time in the Medical Clinic. I think it is important to explain that this conserving of time in the Medical Clinic was not done at the expense of added work for the specialty clinics or for the laboratory. In fact, I think the opposite was true. It has been my impression that using a comprehensive approach in the Medical Clinic resulted in considerable economy in laboratory and x-ray procedures and in hospitalization.

I do not mean to imply that such economies are the reason for applying psychological medicine, for I think the improvement in medical care inherent in its use is obvious. However, I do feel that such economies are an inevitable result and a welcome result, too, in this day when the rising cost of care is one of medicine's major problems.

Similarly, the use of this approach seemed to necessitate fewer of the "rule out disease" variety of referrals to the specialty clinics. I felt that fewer patients needed to be started off on the clinic merry-go-round in the hope that they would come back labeled. Fewer, too, wound up as "floaters," drifting vaguely through the clinics. Those who have worked in any of the out-patient specialty clinics know what a burdensome and frustrating load this kind of patient makes.

Some of you may be wondering whether I didn't find it necessary to get what might be regarded as unnecessary consultations and laboratory tests anyway in order to establish rapport and convince the patient. I have become convinced that while it is sometimes necessary to use these stratagems in this way, in general, they do not work as well as we like to think they do. Perhaps this is a good time to point out that when we order a plethora of laboratory and x-ray procedures ostensibly to convince the patient, more often than not we are ordering these procedures to bolster our own confidence in our diagnoses. When we have facts such as are apparent in the case histories given, we need less of such reassurance. With regard to using a profusion of laboratory tests to impress the patient with the thoroughness of the examination and thus establish rapport, I can only say that there are easier ways of establishing better rapport inherent in psychological medicine.

This brings us to a consideration of the second question that came up in regard to integrating psychological medicine into medical practice. That question was asked in various ways. "Is this factual?" "How accurate are these guesses about patients' feelings?" "How much can we rely on our impressions of emotional aspects of cases in proceeding in treatment?" "Is this information exact enough so that we can really bank on it and be safe in not pushing our diagnostic armamentarium to the utmost?"

The answer that I have found is that these facts can be used with the same confidence that we use any other facts gathered in our medical workup. However, just as the radiologist can see facts on a film that the uninitiated have not learned to see, so skills such as we described earlier enable one to gather from a patient psychological facts which may not be evident to someone less sensitive in this regard. Because of our almost exclusively materialistic background, it is easier for doctors to see the radiologist's "facts" derived from the film than to see psychological facts derived from equally good evidence. It is hard for us to make confident use of clinical information obtained through skills in interpersonal dealing. We have all seen carefully correct medical workups which omit nearly all of the really relevant information for this reason. Thus we might see duly recorded in a history of a patient with gynecological complaints, for example, the fact that the patient had measles at age four but find no mention of the fact that living her early years with a brutal, indifferent father had colored all her subsequent feelings about and reactions to sex.

The question here, then, is not so much "Is this material factual?" as it is "How can we doctors overcome our own blind spots and mental sets so as to be able to accept this material as factual and act on it?" It seems to me that a doctor's ability to recognize and integrate these facts into medical practice is a measure of his working understanding of the total organism point of view that we all pay lip service to these days.

Given a set of facts such as in the case of the woman whose daughter had kicked her long ago, the question is no longer whether we are justified in not working to the limit our diagnostic instru-

ments, our special departments, and the patient in an attempt to pin something organic on the patient, but rather whether we are justified in doing so.

There is still a third question. "Does becoming interested in psychological medicine make one more likely to miss organic disease?" I think it is evident that an exaggerated development or interest in this regard might have the same effect as a distorted interest in any special part of medicine, including the usual extra interest in organic disorders with which medical training has endowed most of us.

As I have indicated earlier, an awareness of emotional factors does not exclude an awareness of organic factors. There is no more excuse for slighting organic factors while paying attention to emotional factors than for neglecting to examine the patient's heart irrespective of the demonstration of pathology during examination of his lungs.

I think the question has been well answered by Weiss in the quotation, "Somebody usually reminds me that in becoming interested in psychosomatic medicine one may overlook organic disease, not mentioning that an exclusive organic orientation leads to equally serious consequences in overlooking neurotic illness. Of course, as long as we are human, we are going to make mistakes. But if we plant one foot firmly in tissue pathology and the other foot firmly in psychopathology, then I think we have the correct balance for this approach."[17]

These are the main questions which came up before I started on the Medical Clinic regarding the feasibility of integrating psychiatry into medical practice, and these, too, are the observations I made in the Medical Clinic in answer to them.

While in the Clinic I have learned some other things about this kind of practice which I would like to talk about briefly before I conclude.

I was surprised to learn how frequently depressions occurred as the primary difficulty in patients consulting a doctor in a general medical practice. At first I thought this might be peculiar to the University Hospitals, but I learned that other doctors in practice have had the same experience. It was interesting to see how few of these patients expressed depression in psychological terms. Almost all were disguised by physical complaints. Out of the last 150 new patients I saw in the Medical Clinic prior to January 1, 1950, depression was the sole or major problem in eighteen. It was impressive to observe that among the patients seen, persons who developed symptoms of peptic ulcer for the first time during middle age were all in a depression at the time they had their symptoms.

One very pleasant thing I discovered about this kind of practice was that the practice of medicine was more satisfying than it had ever been before. You all know how we tend to get the major part of our pleasure in medicine out of making a difficult organic diagnosis and competing in the diagnostic game, the kind of satisfaction that makes us push hard and stretch points to diagnose a rare condition such as Cushing's Syndrome, et cetera. Obviously this attitude is hard on the neurotic. Whitehorn called attention to this fact when he said that "the neurotic runs the considerable risk of being reacted against emotionally as if he or she were cheating in the diagnostic game." I no longer feel that neurotic complaints are merely unavoidable chaff to be waded through to get at the organic nuggets mixed in. It seems to me now that almost every case has the potentialities of enthusiastic interest which I used to reserve for diagnosing multiple myeloma ectopic pregnancy, and the like. Incidentally, I think this new frame of mind makes it easier to treat the kind of problems that make up the bulk of practice since an ability to feel friendly interest in the patient is the cornerstone of therapy.

I am a little afraid that what I have been saying might leave you with the impression that psychological medicine is something to be applied only in dealing with functional complaints. Actually, it is a universally useful instrument in our relationships with all patients.

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(Continued on Page 796)

THE 1949 CANCER STATISTICAL STUDY

Minnesota Department of Health

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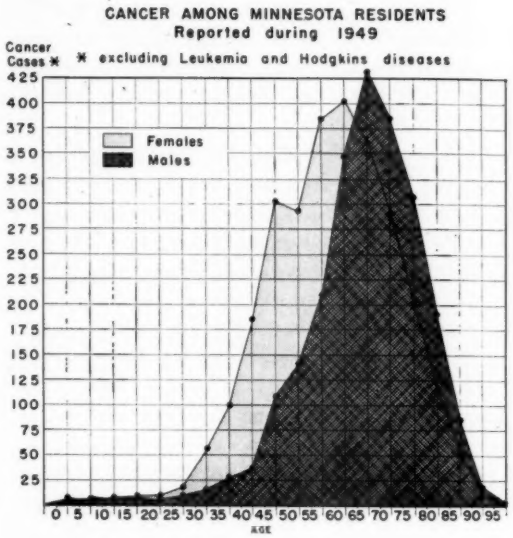
IN 1948, the Division of Cancer Control of the Minnesota Department of Health began a statistical study of reported cases of cancer among patients in hospitals throughout the state. Findings accumulated during the initial year of the study were published in the January, 1950, issue of MINNESOTA MEDICINE.[2] That preliminary study was based on 3,798 case reports collected under a State Board of Health regulation. In order to assure legal protection for those participating in the study, cancer reporting was inaugurated into a statute by the 1949 State Legislature. The total cases reported during 1948 were 5,176. The number of cases included in the present (1949) report, total 5,473, an increase of 297 over the 1948 total. The rate at which cases are being reported for the first six months of 1950 would indicate a further substantial increase by the time the 1950 study is terminated as of April 15, 1951.

The number of hospitals reporting has also increased. During 1949, thirty-five additional hospitals came into the program, making a total of 178 hospitals reporting cancer cases as of December 31, 1949. This total is 90 per cent of the hospitals in Minnesota requested to participate. In respect to percentage of hospitals reporting, Minnesota compares very favorably with other states in which there is a program of statistical reporting on cancer. This fact is brought out in a recent study by the Cancer Control Division of the Pennsylvania Department of Health.[1]. In that study, letters and questionnaires were sent to fifty-three state and territorial departments of health to find out what methods were used and what measure of success was achieved in different sections of the country. Of the forty-four states replying, nineteen favored voluntary reporting by hospitals. Among states that depend upon this system, the percentage of hospitals cooperating is not impressive. Pennsylvania compares favorably with other states, with only 30 per cent of Pennsylvania hospitals reporting.



The method used in Minnesota is voluntary reporting by hospitals. Two field workers are employed to visit hospitals and aid recorders in making their reports on cancer cases as complete as possible. Excellent cooperation has been given by practically all hospitals. The chief problem encountered in any voluntary reporting system is the difficulty in obtaining complete histories on patients hospitalized with cancer. The two most important questions asked are these:

How long after noticing his symptoms did the patient delay before seeing his doctor?

How long after the first visit to the first physician was the patient hospitalized?

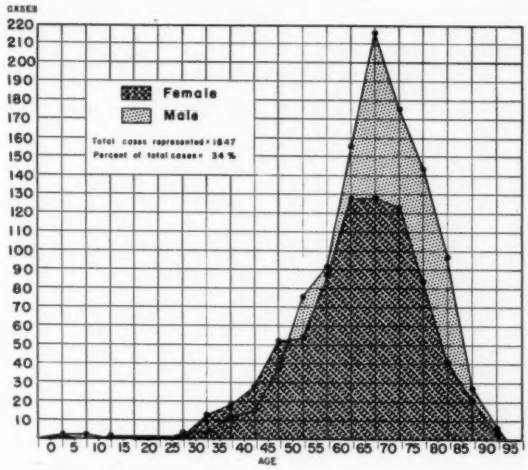
Answers to these questions depend upon histories contained in hospital medical records. These histories in turn depend upon the memories of both the doctor and the patient, which cannot always be relied upon. It is hoped that, during 1950, more accurate reports can be obtained through more intensive field work.

Despite an increase in number of reports—162 more among males in 1949 than in 1948, and 135

TABLE I. CANCER CASES REPORTED ACCORDING TO COUNTY OF PATIENT'S RESIDENCE

COUNTY	TOTAL NUMBER OF REPORTS RECEIVED 1948	1949
Aitkin	24	28
Anoka	31	18
Becker	45	66
Beltrami	31	36
Benton	17	17
Big Stone	19	16
Blue Earth	91	89
Brown	53	57
Carlton	42	45
Carver	20	27
Cass	31	20
Chippewa	34	37
Chisago	24	19
Clay	23	22
Clearwater	16	13
Cook	5	3
Cottonwood	13	23
Crow Wing	50	52
Dakota	49	68
Dodge	5	4
Douglas	42	32
Faribault	22	20
Fillmore	7	9
Freeborn	30	40
Goodhue	57	66
Grant	10	19
Hennepin	132	109
Houston	4	10
Hubbard	15	25
Isanti	15	21
Itasca	68	65
Jackson	18	13
Kanabec	21	9
Kandiyohi	36	31
Kittson	13	17
Koochiching	28	35
Lac Qui Parle	24	14
Lake	19	26
Lake of the Woods	9	8
Le Sueur	30	41
Lincoln	11	16
Lyon	41	25
McLeod	21	28
Mahnomen	10	8
Marshall	22	12
Martin	27	29
Meeker	40	28
Mille Lacs	44	37
Morrison	53	48
Mower	47	61
Murray	21	14
Nicollet	31	23
Nobles	23	36
Norman	24	21
Olmsted	3	3
Otter Tail	75	73
Pennington	34	29
Pine	24	37
Pipestone	9	10
Polk	79	73
Pope	16	13
Ramsey	21	23
Red Lake	17	16
Redwood	27	27
Renville	28	38
Rice	45	42
Rock	5	3
Roseau	26	16
St. Louis	214	237
Scott	20	27
Sherburne	17	12
Sibley	25	23
Stearns	126	146
Steele	23	19
Stevens	14	23
Swift	30	22
Todd	47	33
Traverse	7	6
Wabasha	25	20
Wadena	24	18
Waseca	8	12
Washington	45	56
Watonwan	26	23
Wilkin	17	16
Winona	44	54
Wright	40	25
Yellow Medicine	22	19
Minneapolis	1358	1416
St. Paul	701	844
Duluth	289	327
Unknown	7	36
TOTAL	5176	5473

DIGESTIVE CANCER AMONG RESIDENTS OF MINNESOTA
Reported during 1949



more among females—morbidity percentages for cancers in both male and female patients are altered very little, whether one considers the overall picture or those representing cancers at specific sites. Peak year and age-range pictures are also similar for 1948 and 1949. Table 1 compares the number of cancer cases reported in 1948 with the corresponding figures for 1949, by patients' counties of residence.

The cancer cases reported as discharged by Minnesota hospitals during the period from January 1 to December 31, 1949—a total of 5,473 cases—are used as the basis for the graphs presented in this report. Regarding sites of cancer, as shown in the graphs, the following situations may be noteworthy:

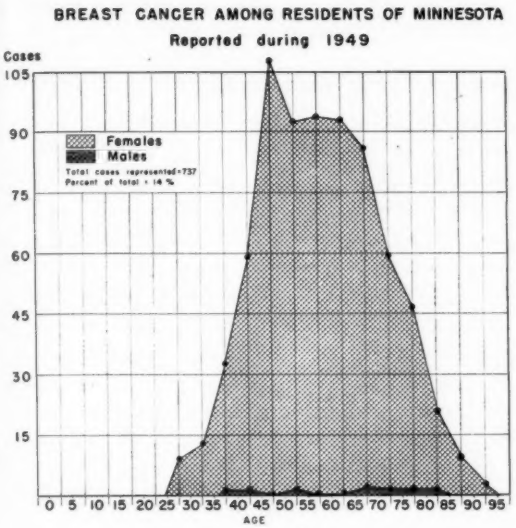
Cancer of the digestive tract, with a total of 1847 cases, including esophagus, bowel, rectum and other sites in the digestive organs, comprises the largest single group of reported neoplasms in the Minnesota study. In digestive tract cancer, cases among males are more frequent than among females, the peak year for both sexes being sixty-seven and the age range from forty-two to eighty-seven years.

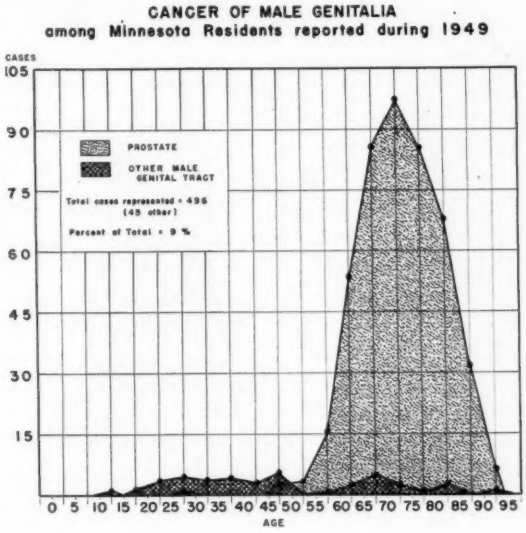
In cancer of the breast, most of the cases are found between the ages of forty-two and seventy-two years, as in the 1948 picture. Cancer of the male breast is negligible.

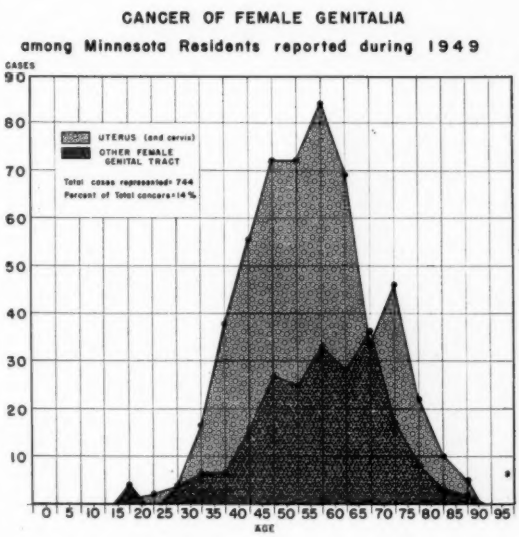
According to the study, cancer of the uterus, including the cervix, occurs mostly between the

TABLE II. CANCER REPORTED AMONG MINNESOTA RESIDENTS BY SITE AND AGE—1949

Age	Breast		Ut.	Other	Pros.	Other	Urinary		Digestive		Respiratory		Buccal		Skin		Brain & Cns.		Leukemia		Hodgkin's		Other		Total 5473	
	M 8	F 729	533	211	451	45	M 282	F 201	M 1065	F 782	M 214	F 83	M 77	F 32	M 60	F 28	M 57	F 46	M 75	F 60	M 43	F 38	M 165	F 188	M 2542	F 2931
0-4							3	3	1	1							1	1	6	2			2	3	7	8
5-9							1	1	1								3	3	6	7	4		1	2	6	6
10-14					1		2	2		1							2	4	2	3	2	1	1	1	6	8
15-19			1	2		1	2	3		1	1				1		2	1	3		1			2	7	10
20-24			2			3		1		1		1				1	1	1	4	1	2	5	1	2	5	9
25-29		9	4	2	1	4			2	1					2		1		1	1	4	1	1	2	11	18
30-34		13	17	6		3	1		3	13	2	1	2	3			3	2	1	2	3	1	5	2	19	57
35-39	1	33	38	6		4	4	2	12	19	5	1	3	1	2		2	2		3	1	1	7	10	39	113
40-44	1	59	56	16		2	11	7	16	28	5	4	4	2	3		5	4	2	4	1	2	4	10	50	187
45-49		107	72	27	2	5	15	13	38	52	17	4	6	2	2	1	14	4	4	2	5	3	11	11	110	303
50-54	1	93	72	25	4	4	20	16	74	53	18	9	7	3	5	2	6	3	5	5	4	4	8	17	146	294
55-59		94	84	33	16	1	32	35	91	87	30	16	8	4	8	2	7	10	7	7	3	5	19	21	212	386
60-64		93	69	28	53	3	49	30	156	128	42	7	11	6	7	5	5	5	8	6	5	6	22	30	348	401
65-69	2	86	34	35	86	6	36	29	217	128	45	11	8	4	6	3	2	2	7	4	2	3	26	29	432	363
70-74	1	59	46	17	97	3	44	15	176	118	25	13	8	2	4	1	3	2	8	8	1		26	19	386	293
75-79	1	47	22	8	86	1	36	22	144	84	11	4	8	1	7	3			7	3	3	4	14	10	307	202
80-84	1	23	10	3	67	4	16	12	97	41	9	9	7	2	7	6		1	2	2	2	1	8	11	215	119
85-89		9	5	2	32		6	7	27	21	4	2	4	1	2	1						1	8	6	83	54
90-94		3			6	1	2	2	6	4		1	1	1	4	2			1						20	13
95-99							1									1									1	1
Unknown		1	1	1			1	1	4	1								1	1				1		6	6







ages of thirty-two and eighty-two years, and is much more prevalent than cancers of the other female genital organs.

From the reports, cancer of the prostate hardly ever occurs before the age of fifty-two years, with the bulk of the cases appearing between fifty-seven and ninety-two. Cancer of other male genitalia is insignificant.

A few cases of urinary tract cancer were reported as early as the age of two years. Both males and females begin to show urinary cancers in greater numbers at the age of thirty-seven years and continue to age ninety-two; more cases are found among males.

The 297 cases of respiratory tract cancer reported make up 5 per cent of the total. This type of cancer appears nearly three times as often in the male as in the female. The age range is from forty-two years to eighty-two years for both sexes.

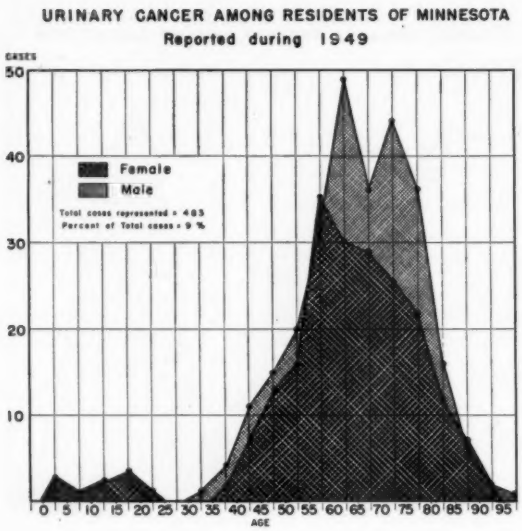
Buccal cancer is more prevalent in our reports among males than females. While both groups reach a peak at age sixty-two, cases range from thirty-two to eighty-seven years of age. No buccal cancer is recorded before the age of twenty-seven.

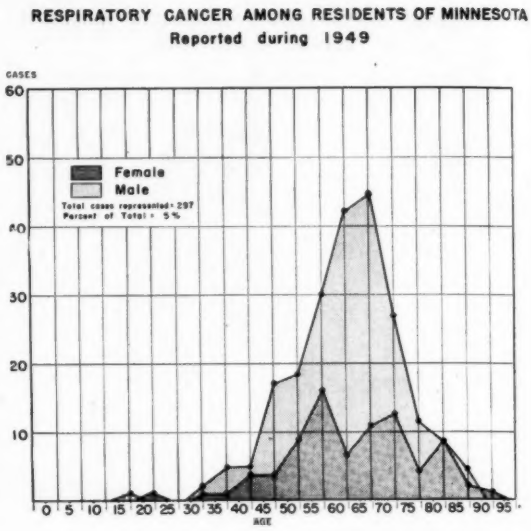
With only eighty-eight cases of skin cancer reported, no consistent pattern is found. Cancers of the skin occur as early as seventeen years and manifest themselves in greater numbers toward the latter part of life. This holds true for both male and female, with cases predominating among males.

Reports show that the majority of cases of cancer of the brain and central nervous system occur earlier in life than most other true cancers. The female age range continues a little later in life than the male.

Leukemia is chiefly a disease of the very young; 60 per cent of the cases reported are under fifteen years of age. Most of the leukemias in later life are found in the age groups forty-two to eighty-two.

Although reported cases range from age seven to eighty-seven, no real pattern of occurrence can be demonstrated for Hodgkin's disease. However,





this conclusion is based on only eighty-one cases, or 2 per cent of the total.

In 1949, as in 1948, it was demonstrated that patients with cancer of the mouth and skin are the last to seek medical advice, while leukemia, Hodgkin's, and cancer of the central nervous system are the types of malignancy that send patients to their physicians earliest.

Over half of the patients with cancer of the digestive tract, female genital organs, breast, respiratory tract, and male genital organs (other than prostate) representing 68 per cent of the total cases reported, were hospitalized in less than a week after first seeing a physician.

Comparison was made, by site, of the Minneapolis, Saint Paul, and Duluth cases with the total picture. No significant difference was observed.

Summary and Conclusions

1. A statistical analysis of 5,473 cancer cases reported as discharged by Minnesota hospitals during the period January 1 to December 31, 1949, is presented. This represents an increase of 297 cases over the 1948 total of 5,176.

2. The current (1949) report represents voluntary participation by 90 per cent of Minnesota's hospitals. In the reporting of cancer cases, Minnesota ranks very high among states using a voluntary hospital reporting system.

3. Despite an increase in number of cases reported in 1949 over 1948, incidence of cancer, by site, among Minnesota hospital patients was virtually the same in 1949 as in 1948.

4. More accurate reporting is desirable regarding duration of delay by patients in reporting symptoms to physicians and by physicians in hospitalizing patients.

5. Much more intensive education of the public is desirable regarding the recognition of symptoms of cancers of the mouth and skin, which offer the best prognosis yet are usually the latest to be reported to physicians.

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The final diagnosis in pulmonary tuberculosis rests upon the demonstration of the tubercle bacillus just as that of carcinoma of the lungs depends upon histologic proof. A reasonable certainty of predicted diagnosis can be obtained in about four-fifths of the cases with only the usual x-ray examination such as posteroanterior, oblique or lateral films.—MERRILL C. SOSMAN, M.D., New England J. Med., June 1, 1950.

Today, because of procedures which have become routine, the private physician's office is a bulwark against such diseases as smallpox and diphtheria. In like manner, it can become one of the most effective agencies for tuberculosis control. By promoting such a public health measure, the general practitioners of the nation would be acting in line with the great tradition of the profession as a force for prevention as well as cure of disease. —A. C. CHRISTIE, M.D., *Pub. Health Rep.*, June 2, 1950.

INFANT METHEMOGLOBINEMIA IN MINNESOTA DUE TO NITRATES IN WELL WATER

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IT should be emphasized at the outset that this is not primarily a clinical study. Comparatively few infants were examined and none was treated by the State Health Department. The data were furnished by the attending physicians but many physicians were visited to obtain more complete information. Most of the field work, however, was devoted to the engineering aspects of the water supplies. This was basically a study of a public health problem. The study was inaugurated to determine whether methemoglobinemia due to nitrates in well water had occurred in the past, whether it was still occurring, its frequency and its distribution. In addition, information was desired as to the characteristic signs and symptoms, the diagnosis and the treatment, particularly the preventive treatment. This information was made available to all physicians so that they might more readily recognize this disease and more adequately treat it. Toward this end the services of a pediatric consultant were made available as well as certain laboratory procedures not readily available in the rural areas. This study was a joint undertaking by the Division of Maternal and Child Health interested in the infants, and by the Section of Environmental Sanitation concerned with the toxic chemical in the water, its concentration, its variations, its distribution, and in methods of reducing or eliminating the chemical (nitrate) from the water. The subject will therefore be discussed from these two aspects.

It has been known for some time that the ingestion or absorption of various drugs such as sulfonamides, nitrobenzene compounds, acetanilid, bismuth subnitrate, sulphates, nitrates, and chlorates is capable of producing a cellular type of methemoglobinemia.[1] This is the acquired type, in contrast to congenital idiopathic methemoglobinemia, of which fifteen proved cases have been reported.[6] When no toxic agent could be detected in the acquired type, it was usually spoken of as idiopathic cyanosis.

In 1940, Schwartz and Rector[24] reported a case of methemoglobinemia of unknown origin in a two weeks' old infant living in Montana, fed on diluted evaporated milk formula, which was successfully treated with methylene blue solution. The physical examination was negative except for abnormal color of the skin. The blood contained 57 per cent methemoglobin, but the water used in the formula was not examined for nitrates. This may have been, however, a case of nitrate poisoning from well water, as such cases have since been reported in Montana.

In 1945, Comly[5] discovered the etiologic factor in two Iowa infants about one month of age who probably would have been considered as cases of idiopathic cyanosis. Interestingly enough, the father of the first infant pointed out the answer by suggesting the possibility of a peculiar reaction between the well water and the soy bean preparation used in the formula, producing a poison which caused the infant's condition. An open-mindedness on the part of the admitting physician to what appeared to be a "cock and bull" theory led to analysis of the well water. This showed a high nitrate content and thus the etiologic factor was discovered.

Following Comly's report of two proved cases and seven suspected cases from rural Iowa, Faucett and Miller[8] reported three cases in Kansas, and Ferrant[9] reported two cases from Belgium. Since then, cases have been reported from rural Manitoba,[15,16] Ontario,[15] and Saskatchewan,[22] Illinois,[29,30] Iowa,[2,11] Nebraska,[23,27] Michigan,[18,21] Kansas[10] and several other states. New York State reported its first two cases in July, 1949.[20] The condition, therefore, is apparently quite widespread in certain rural parts of the United States and Canada.

Medical Aspects

The first case of methemoglobinemia in Minnesota was reported in January, 1947, by a physician at Tyler, in southern Minnesota. Since then,

Aided in part by a grant from the United States Children's Bureau.

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Presented at University of Minnesota General Staff Meeting, March 10, 1950 and published in *Bulletin of the University of Minnesota Hospitals and Minnesota Medical Foundation*, March 10, 1950.

a total of 146 cases, including fourteen deaths, have been voluntarily reported to the Minnesota Department of Health, since methemoglobinemia is not a reportable disease.

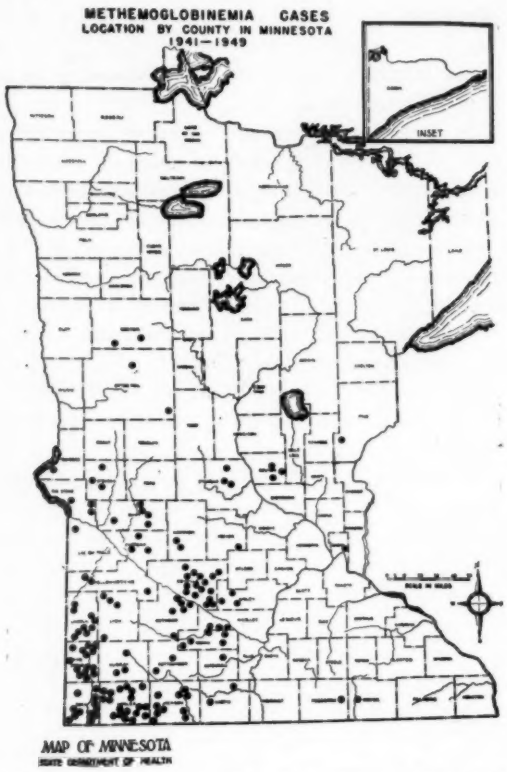

Fig. 1. Location by county of methemoglobinemia cases in Minnesota, 1941-1949.

As physicians in Minnesota became more familiar with this condition, methemoglobinemia was considered more often in differential diagnosis as evidenced by requests for methemoglobin determinations in cyanotic infants as well as frequent requests for analysis of suspected farm wells. Doubtless, many mild cases which cleared up promptly were never reported. Familiarity with this condition by physicians as well as rural parents has apparently been responsible for a markedly decreasing incidence of reported cases in 1949, only twelve cases out of a three-year total of 129 cases in 1947, 1948, and 1949. The last case was reported in July, 1949.

Distribution of Cases.—Before discussing the findings, it might be well to point out the distribution of cases in this series. As can be seen from the spot map of Minnesota (Fig. 1) practically all of the cases have occurred in the southern half of the state and most of them in southwestern Minnesota. There have been only three cases north of the midline of the state, with Detroit Lakes, in Becker County, the most northerly reported case. No cases have been reported in the northern section of the state.

Seasonal Incidence.—The incidence of cases of methemoglobinemia varied from month to month. In 139 cases out of our 146 reported cases with reliable date of onset, the highest incidence occurred in June with nineteen cases, October with eighteen and April with sixteen cases; the lowest number occurred in November with six cases. The seven cases omitted above were seen by physicians between 1941 and 1946 before our study began, which accounts for the lack of data.

Of the 129 cases that occurred in 1947, 1948, and 1949, almost one-third occurred in the second quarter—April, May and June—(31.8 per cent). The balance of the cases were more or less equally distributed in the other three quarters. The actual percentage of births in Minnesota during the same quarters were 25.0, 24.6, 26.3 and 24.1 respectively. There was a marked increase in the percentage of cases in the second quarter in comparison with the percentage of births in the same quarter. Any significance is, however, questionable because of the small number of reported cases, totaling forty-one, in comparison with the births which totalled 54,415.

It should be stated that it has not been possible to demonstrate any significant seasonal variations in the concentration of nitrate nitrogen in farm or municipal wells by periodic samplings carried out on a number of water supplies. This will be discussed in more detail under water supply aspects.

Sex.—There were eighty males and sixty-six females in the study.

Age.—As to age at onset of symptoms, over half occurred between two and four weeks of age; almost three fourths occurred between two and six weeks of age; over 90 per cent occurred under two months; and only 8.3 per cent were between two and five months of age. The youngest case was seven days old and the oldest was five months old.

Feeding.—There were twenty-one infants who were breast fed for a variable period of from one

to four weeks before being changed to a formula containing well water. These infants, therefore, developed symptoms at an age from one to four weeks later than the non-breast fed infants.

The number of days the infant was on well water before symptoms developed was dependent on a number of factors, such as the nitrate nitrogen content of water, the amount of water in formula, amount and frequency of feeding, supplemental water feeding, length of time water was boiled, various physiologic considerations, and probably other unknown factors.

More than half of the 114 infants on whom this information is available (sixty-one cases) developed symptoms in one to three weeks after being on a formula requiring considerable water as a diluent. Eighteen per cent of these infants were on well water more than thirty days, the longest period being sixty days; about 15 per cent developed symptoms in less than seven days. The shortest period before symptoms developed was one day, in a two-month-old infant, on an evaporated milk formula diluted with water containing 140 parts per million of nitrate nitrogen. In this case the water was boiled for over thirty minutes to make sure all the "bugs" were killed. As a result, the nitrates were concentrated almost threefold by evaporation of water. This was demonstrated in the laboratory by boiling a sample of water from this particular well for thirty minutes. Before boiling, the nitrate nitrogen content was 140 parts per million; after thirty minutes boiling it was 410 parts per million as a result of evaporation.

Symptoms.—The characteristic symptom is a grayish blue or brownish blue cyanosis which begins around the lips, spreads to the fingers and toes, the face, and eventually covers the entire body. This occurred in all cases. When well developed, it is quite obvious. In early or mild cases the mother may not notice the cyanosis until her attention is called to it by a relative or neighbor. Incidentally, farmers who have become familiar with this condition call these infants "blue water babies." In several cases a physician making a routine periodic physical examination first noted the cyanosis.

The formulas used are of special interest. Evaporated and powered milk, which require large amounts of water as diluent, were used in 75 per cent of 116 cases with this information available.

TABLE I. INFANT FORMULAS IN 116 CASES OF METHEMOGLOBINEMIA

Type of Milk in Formula	Cases No.	Per Cent
Evaporated	46	39.7
Powdered	41	35.3
Cows's	29	25.0
Breast fed	0	0

*Balance of 146 cases did not report formula used.

Diluted cow's milk was used in 25 per cent. No cases occurred among infants in this group who were breast fed, with only one possible exception. This was a three weeks' old infant who was breast fed, but during the four days preceding the onset of cyanosis was given, in addition, a formula of liquid SMA diluted with 1 to 1½ ounces of well water on only three occasions, plus 1½ ounces of water daily. On examination, in addition to the cyanosis there was a loud systolic murmur over the entire chest, diagnosed as congenital heart disease, from which he died some time later. Methemoglobin totaled 1.57 grams per 100 ml. of blood which constituted 11.5 per cent of the hemoglobin, and the well water contained 196 parts per million of nitrate nitrogen. It is difficult to understand how methemoglobinemia could be present with such a small quantity of formula and water and in view of the pathology present. In spite of this one possible exception, this would appear to be another reason for urging breast feeding during the first two months of life, especially in rural areas, as Medovy has suggested.[15]

Differential Diagnosis.—In the differential diagnosis certain serious conditions must be ruled out. Among them are congenital heart disease, abnormalities of the respiratory tract such as pneumonia, atelectasis, pneumothorax, diaphragmatic hernia and congenital pulmonary and tracheal malformations, as well as "thymic syndrome." It should be remembered, as Ferrant[9] has pointed out, that there is a striking difference between the cyanosis and the alarming condition of the patient on the one hand and the normal pulse and respiration and lack of physical findings on the other. If the cyanosis is severe and persistent, systemic effects are producted due to anoxemia, and death may occur.[1,31]

Diagnosis of Methemoglobinemia.—The diagnosis of methemoglobinemia may be presumptive or absolute. In either case, however, it must first

be suspected. A presumptive diagnosis may be made, if on removal of venous blood for a hemoglobin determination the blood is chocolate colored, and if there are more than 10 to 20 parts per million of nitrate nitrogen in the water used in the formula. If the blood is not examined, a presumptive diagnosis is justified if there is a spontaneous disappearance of cyanosis in twenty-four to forty-eight hours on changing the water in the formula, and the nitrate nitrogen content of the water used exceeds the suggested maximum of 10 to 20 parts per million. In either case the history and physical finding should be typical. An absolute diagnosis is made by demonstrating a definite methemoglobin line on spectroscopic examination[1] or by the chemical analytic method of Evelyn and Malloy.[7]

TABLE II. METHEMOGLOBIN DETERMINATIONS*

Mhb. Gm/100 ml. of Blood	NO_3N ppm. in Well Water	Days on Formula	Formula and Well Water	Age at Onset in Days
0.355	66	19	SMA	24
0.65	40	11	Evap.	25
0.97	100	49	Biolac	56
0.985	140	1†	Evap.	64
2.5	73	18	SMA	24
3.00	110	47	SMA plus Biolac	58
3.05	110	20	2/3 dil. cow's milk	36
4.95	500	9	1/2 dil. cow's milk	45

*By method of Evelyn and Malloy.
†Water was boiled for over 30 minutes.

In the above eight cases the diagnosis was confirmed by methemoglobin determinations by the method of Evelyn and Malloy,[7] using an electric colorimeter which was transported to the bedside of the patient on long distance telephone request to the State Health Department from the attending physician. Facilities for methemoglobin determination were not available in the rural areas where cases occurred. The readings varied from a low of 0.35 grams per 100 ml. of blood two days after hospitalization, to a high of 4.95 grams per 100 ml. of blood.

Treatment.—Treatment in most cases consisted of changing the water used in the formula to an approved municipal supply, with prompt recovery. In forty-six infants oxygen was used, but most of the physicians did not think it was of any benefit. Furthermore, removal of the infant to a hospital automatically changes the water supply and is probably responsible for the recovery in twenty-four to forty-eight hours. In severe cases more active treatment becomes necessary. One per cent methylene blue solution, 1 to 2 mg. per kg. intravenously, may be life saving.[36] It was used in nine cases with prompt recovery, the cyanosis clearing up in less than half an hour.

Mortality.—There were fourteen deaths, a mortality rate of 9.6 per cent. No specific treatment was used in these cases since the condition was either not recognized or methylene blue solution was not readily available. It is of interest to note that four deaths were ascribed to thymic hypertrophy or syndrome, notwithstanding the fact that the symptoms were characteristic of methemoglobinemia, and the well water used in the infant's formula contained 70, 120, 150, and 200 parts per million of nitrate nitrogen, respectively. There were no autopsies done on these four infants. In Minnesota during 1947 and 1948, fifteen infant deaths were reported as due to hypertrophy of the thymus, of which the four mentioned above were actually deaths from methemoglobinemia. Many cases of cyanosis in early infancy in rural areas have probably been incorrectly treated for hypertrophy of the thymus in the past. Donahoe[5] reported five cases of cyanosis in babies on farm well water who had been given from two to eight x-ray treatments for suspected thymus enlargement, but which were cases of nitrate cyanosis. Two of the thymic deaths in this series received x-ray treatment. Several infants who recovered also received x-ray treatments. Dr. G. B. Logan, Section of Pediatrics at the Mayo Clinic, states,[13] "I do not believe that an enlarged thymus is a cause of death unless it can be shown by autopsy examination."

Typical Case Histories

Case 1.—Female infant, born October 1, 1948, and discharged from hospital October 6, 1948. The formula consisted of SMA and well water, equal parts, a total of 24 ounces daily and 4 to 5 ounces of supplemental water between feedings. At age of twenty-four days, vomiting occurred; on twenty-fifth day of life, cyanosis developed. The following day a physician made a diagnosis of congenital heart disease. Five days later the infant was hospitalized at a nearby clinic where a diagnosis of methemoglobinemia due to nitrates was made. Changing the water in the formula to an approved municipal supply resulted in recovery in two days. Blood examination showed the presence of methemoglobin to the extent of 2.5 grams/200 ml. of blood. Analysis of the well water showed nitrate nitrogen 73 ppm.,

sulphates 70 ppm. and chlorides 28 ppm. The formula was changed to 24 ounces pasteurized milk, 8 ounces water from municipal supply and Karo. There was no recurrence.

Case 2.—A female infant was discharged from the hospital to the farm home on an evaporated milk mixture. At the age of ten days vomiting developed and persisted for several days. At the age of twenty days a generalized grayish-blue cyanosis developed. On the twenty-second day of life the infant was hospitalized when fluoroscopic examination of the chest resulted in a diagnosis of hypertrophic thymus. Oxygen was given as well as x-ray treatments daily for three days. Symptoms cleared up and the infant was discharged. Three days later, while on the same formula containing well water, cyanosis became marked and the infant was hospitalized again. The physical examination of the heart, lungs, and thymus was negative and the cyanosis cleared up in three days without any treatment, other than the change of the water. Analysis of the water from a shallow farm well showed nitrate nitrogen 90 ppm., nitrite nitrogen 4 ppm., sulphates 100 ppm. and chlorides 140 ppm. The water used in the formula was changed and there was no recurrence.

Case 3.—Female infant, born August 10, 1947, weight 7 pounds, discharged from hospital August 16, 1947, on a Lactogen formula, 16 ounces daily. On twenty-second day of life, infant developed diarrhea. On the twenty-ninth day the infant was seen by a physician who found cyanosis of the face and chest, made worse on crying. Admitted to hospital with diagnosis of "infection of the stomach." Infant was discharged on fifth day when symptoms had cleared up. On return to the farm home the same well water was used and four days later diarrhea and cyanosis returned. The physician changed the water to a municipal supply with recovery and no further recurrence. The farm well water contained nitrate nitrogen 37 ppm., sulphates 14 ppm., and chlorides 33 ppm.

Case 4.—Male infant, born August 29, 1948, discharged September 3, 1948. The infant was breast-fed but on September 10, three days before symptoms appeared, the mother added a formula consisting of cow's milk 12 ounces and water 4 ounces. In addition, 8 ounces of supplemental water were given daily. On September 13 at the age of two weeks the infant developed fussiness, excessive crying, and cyanosis of lips during crying spells. Heart, lungs and thymus negative, temperature 96°. Diagnosis was methemoglobinemia. Treatment consisted of oxygen, with recovery in twenty-four hours. Hemoglobin 69 per cent, white cells 11,000, methemoglobin 4.95 grams/100 ml. Well water contained nitrate nitrogen 500 ppm., sulphates 980 ppm., chlorides 480 ppm.

Case 5.—Female infant, born November 1, 1948, birth weight 7 pounds 1½ ounces, discharged on seventh day. The formula consisted of Biolac 1 ounce and 1½ ounces of water, 4 ounces per feeding, five times daily, plus 10 ounces of supplemental water. The water was boiled five minutes. At the age of seven weeks diarrhea and fussiness developed. The mother then diluted the formula with additional well water. Three days later a grayish-blue cyanosis began around the lips and hands and became generalized, accompanied by listlessness. The following day the infant was sent to the hospital. The physical examination was negative except for a duskiness of the skin. A diagnosis was made of methemoglobinemia. On the physician's request a methemoglobin determination was made at the bedside that evening which showed 0.97 grams/100 ml. of blood and 10 grams of hemoglobin per 100 ml. of blood. Twelve hours later (the following morning) the methemoglobin had dropped to 0.49 grams/100 ml. with clearing of the cyanosis. The mother was advised to use water from a neighboring municipal supply. The well water previously used contained nitrate nitrogen 100 ppm., sulphates 1200 ppm. and chlorides 210 ppm. Five minutes of boiling increased the nitrate nitrogen content to 166.25 ppm. No recurrence of symptoms.

Case 6.—Female infant born June 3, 1947, weight 7 pounds 15 ounces, discharged from hospital June 12, 1947, on formula of Carnation milk 14 ounces, water 21 ounces, and dextromaltose 7 tablespoons, with 5 ounces of supplemental water, boiled for ten minutes. At routine physical check-up at age of three weeks a physician noted cyanosis. City water was substituted with recovery in twenty-four hours and no recurrence. Analysis of farm well water showed nitrate nitrogen 62 ppm., sulphates 360 ppm., and chlorides 84 ppm.

Discussion

The question as to why only young infants, usually under two months of age, and not older members of the family develop cyanosis is difficult to answer. Incidentally, not all young infants develop this condition. There have been a number of instances in this series where one infant developed cyanosis, whereas a sibling, born one or two years previously, fed on a simliar formula and using water from the same well, failed to develop cyanosis. Older children and adults, drinking the same water, did not develop this condition.

According to Comly,[3] there are a number of factors which make an infant more susceptible to nitrate cyanosis than older persons. The most important single factor, in his opinion, is that the infant has less oxidizable hemoglobin than an adult. Other factors suggested are: that there is a high fluid intake with greater turnover of water in proportion to body weight; that the intestinal flora may contain more nitrite converters; that the infant's intestinal mucosa is more easily damaged and favors absorption of nitrites; that the limited

excretory power of the young infant's kidney may favor nitrogen retention; and that nitrate ions may be more firmly bound by infantile hemoglobin because of immaturity of certain enzymes.

According to Ferrant[9] nitrates in well water are probably more toxic for newborn infants than for adults, especially if the infants have digestive disorders. This may be a factor, as 14 per cent in this series had diarrhea.

Cornblath and Hartmann,[4] however, claim that only younger infants develop methemoglobinemia upon ingestion of water containing nitrates, because of the low gastric acidity characteristic of the neonatal period.[19] As a result of experimental work, they postulate that if there is no free acid in the stomach and the pH of the gastric juice is over 4.0, nitrite-producing organisms can exist high in the gastrointestinal tract in sufficient number to reduce nitrates to nitrites before the former can be completely absorbed. In their control group of infants, the gastric acidity was increased by lactic acid milk feeding. In these cases they were unable to produce methemoglobinemia with mixtures containing high nitrate content. This appears to be a reasonable explanation. In three cases of methemoglobinemia in this reported series the pH was 4.5, 5.0 and 5.5, respectively.

One final factor must be mentioned. Apparently, the cyanosis may clear up spontaneously when the infant becomes older. This may be due to the fact, as pointed out by Cornblath and Hartmann[4] and others,[19,25] that the gastric acidity increases in older infants. This was illustrated in this series where three cases occurred in one family, one case in 1941, one in 1942 and one in 1944. All three infants developed cyanosis, vomiting, diarrhea and excessive crying at the age of one week while on a SMA formula. In the first two cases the symptoms cleared up at the age of three months with no treatment and with no change in the farm well water used in the formula. The infant born in 1944 was hospitalized when cyanosis developed, and this cleared up in a few days. On returning to the farm home the cyanosis recurred. Nothwithstanding the skepticism of the family physician, the parents changed the water, with prompt clearing up of all symptoms.

There are undoubtedly, however, other factors, and these are all debatable theories.

In passing, it might be of interest to mention a veterinary disease of similar nature as an interesting sidelight. In the spring of 1949 a herd of cattle in rural Manitoba became ill after eating sugar beet tops.[27] Cyanosis was a prominent symptom, giving the appearance of "purple cows." The blood was chocolate-brown in color and methemoglobin was demonstrated. Methylene blue solution was successfully used in treatment but a number of cows died. Analysis of the sugar beet tops showed a high nitrate content but the water contained no nitrates.

While no such cases in farm animals have been reported in Minnesota, this condition is not new. In 1937 a review[14] was made of similar appearance of "purple cows" which had occurred in Colorado and Wyoming due to eating oathay or straw. This condition has occurred since 1923 and has been called "oathay disease." Methemoglobin was demonstrated in the blood, and the oathay and oats contained large amounts of potassium nitrate. Unfortunately, the water used was not analyzed for nitrate. Apparently horses and sheep may also suffer from this type of poisoning. In certain areas in these two states, other plants such as certain weeds, wheat, barley, and cane sorghum sometimes contain sufficient nitrates to cause methemoglobinemia. It has also been reported in sheep in South Africa.

Résumé of Water Supply Aspects*

Nitrate determinations on samples from water supplies were made in the earlier days of the Minnesota Department of Health but were gradually discontinued as a part of the sanitary analysis with the advent of modern bacteriological methods. The health department's interest in the nitrate concentrations of water supplies in the state has been renewed since the first suspected case of methemoglobinemia was reported at Tyler, Minnesota, in January, 1947. From January, 1947, to January, 1950, investigations were made of all water supplies which were reported to be, or suspected of being, involved in cases of methemoglobinemia. In many instances physicians were interviewed in an attempt to determine whether the problem was more widespread than existing information would indicate. The results of these interviews showed that there were, undoubtedly, many cases of methemoglobinemia which were either not being properly diagnosed or were not reported.

In January, 1949, a communication was sent to all physicians in the state asking them to report any suspected case of methemoglobinemia that

*Certain tables, charts and graphs have been omitted.

TABLE III. NITRATE NITROGEN CONCENTRATION IN WELLS CONCERNED IN METHEMOGLOBINEMIA CASES*

NO_3N ppm.	Type of Well Dug	Drilled
Less than 10	0	0
10-20	2	0
21-50	25	1
51-100	52	2
Over 100	50	1

*The phenoldisulfonic method described in the ninth edition of "Standard Methods of the Examination of Water and Sewage" was used for determining the NO_3N concentration for these tests and all others reported in this paper.

had come to their attention in the past several years. The physicians were also asked to notify the department immediately of any new cases.

A study was made of the 146 old and new cases reported as a result of this communication. Each study consisted of accumulating all epidemiological data and obtaining all pertinent information on the water supply involved. Dug wells were found to be the source of water in 129 cases, and drilled wells in four cases. Eleven of the wells were involved in more than one case and two wells caved in before samples were obtained. None of the wells contained less than 10 ppm. nitrate nitrogen (NO_3N) as shown in Table III. (A concentration of 10 ppm. is the maximum recommended by most workers.[3,27,29])

Only two wells contained between 10 and 20 ppm. NO_3N. Insufficient clinical data were available on both of these cases, and they are considered questionable. The samples from many of the 26 wells which contained 21 to 50 ppm. were collected a year or more after a methemoglobinemia case had occurred, and in some instances the well had been abandoned subsequent to the case of methemoglobinemia. The lowest nitrate nitrogen on a sample collected at the time of the infant's illness was 36 ppm.; the highest was 500 ppm.

From the information obtained on the cases reported early in the study and from data published by other workers,[2,10,11,23,27,28] it was considered desirable to determine what factors might influence the nitrate concentration of water from wells. Among the questions which occurred in this connection were the effects on nitrate concentration of pumping, seasonal variations, location and construction, depth and type of wells, and the geology of the area.

Effects of Pumping on Nitrate Concentration.—In order that sampling errors might be eliminated insofar as possible, it was considered necessary that the effect of pumping and the time of sample collection on the nitrate concentration be determined.

Four test runs were made on three different wells. Three of the runs were made over periods of one hour each, with samples being collected every minute for the first five minutes, and every five minutes thereafter. The fourth run was made with samples being collected every hour for a period of six hours. It was concluded from these pumping tests that no significant change in the nitrate concentration is noted with length of pumping, and that the time of collection of the sample after pumping begins is not critical.

Effects of Seasonal Variation on Nitrate Concentration.—To determine the effects of seasonal variation on nitrate concentration, arrangements were made to have samples submitted from certain specified municipal and private wells at routine intervals.

Municipal Supplies.—During this study, twenty-eight (5.4 per cent) of the 514 municipal supplies in the state were found to contain over 5 ppm. NO_3N; sixteen (3.1 per cent) of these contained 10 ppm. or more. The highest concentration was 27 ppm. in a dug well used as the source for a municipal supply in the section of the state from which most of the methemoglobinemia cases have been reported. The health officer of this community advised all residents not to use this water for infant formulas. No cases of methemoglobinemia have been reported from this supply. Eight supplies, ranging in nitrate nitrogen from 5 to 27 ppm., were selected for bi-weekly sampling which was begun in February, 1949. Samples were collected from the sources of supply and from the distribution system in each instance.

Private Supplies.—Four of the wells involved in cases of methemoglobinemia were sampled bi-weekly beginning in February, 1949. These included two wells which were later reconstructed. The remaining two were dug wells, one at Tyler (Lincoln County), and the other at Woodstock (Pipestone County), both of which were located satisfactorily. A fifth supply, a drilled well located one-half mile west of the reconstructed well at Luverne, was also sampled, although this well was not involved in a case.

These periodic samplings were continued for

TABLE IV. PHYSICAL FEATURES AND NITRATE CONCENTRATIONS OF WELLS INVOLVED IN CASES
Number surveyed: 133

Physical Features	NO_3N Concentrations—ppm					
	10 - 20*		21 - 50		51 - 100		Over 100	
	Dug	Drilled	Dug	Drilled	Dug	Drilled	Dug	Drilled
Location:								
Satisfactory 1	5		16		13			
Unsatisfactory ..	19	1	30	2	34	1		
No Data 1	1		6		3			
Construction:								
Curbing:								
Wood	6		15		13			
Concrete tile..1	12		29		28			
Rock or brick.	3				3			
Metal		1		2		1		
No data.....1	4		8		6			
Platform:								
Wood 1	23		39	2	42	1		
Concrete			6		5			
Metal			1					
None		1						
No data 1	2		6		3			
Depth—in feet:								
Less than 20....	3		3		5			
20-40 1	7	1	20		17			
41-60	5		3		6			
61-75	1		5		3	1		
76-100			4	1	3			
101-150	1		1		1			
Over 150			1	1				
No data.....1	8		15		15			

*No wells contained less than 10 ppm.

a period of one year. From the data obtained, it is concluded, within the limits of this study, that the nitrate concentration of a well water remains fairly constant and that seasonal variations do not occur.

Effects of Location and Construction on Nitrate Concentration.—An analysis of the data obtained on the location and construction of the 133 wells investigated in connection with cases of methemoglobinemia showed that none was both located and constructed satisfactorily as judged by the standards of the Minnesota Department of Health. (These standards for safe water supplies specify that a well should be located at least 50 feet from all sources of contamination such as barnyards, privies, et cetera. The well should be provided with a water-tight casing which extends at least 10 feet below and 1 foot above the grade. Vitreous and concrete tile, wood, and galvanized sheet metal curbings are not acceptable. A reinforced concrete platform which extends at least 2 feet from the well casing in all directions should cover the well. A tight seal at the pump base and a stuffing box head on the pump are also specified. Pit construction is not approved.)

None of the drilled wells and only thirty-five of the dug wells were located satisfactorily as shown in Table IV. Seventy-four wells were located within 50 feet of a source of animal contamination (barnyard, hog pen, et cetera) and thirteen within 50 feet of a source of human contamination (privy or cesspool). No data were obtained on eleven supplies.

Wood curbing was used in thirty-four wells, concrete tile in seventy. All but thirteen of the 121 wells on which data were obtained had wooden platforms.

Since no conclusions could be reached from the preceding data on the significance of location and construction on nitrate concentration, a survey was undertaken of all school wells in Nobles and Kandiyohi Counties. Wells at farms adjacent to the schools were also surveyed and used as a basis of comparison, since it was believed that the school environment afforded well locations which are normally free of gross organic pollution as contrasted with sites generally found in farmyards.

In the Nobles County Survey, thirty rural school and sixty-four farm wells were studied. The nitrate concentration in the school wells was lower than in the nearby farm wells in all but three instances.

Sixty-eight school and fifteen farm supplies were studied in the Kandiyoki County Survey. Only one of the school wells and six of the farm supplies contained over 10 ppm. NO_3N. Wells for the most part were of drilled or driven construction as contrasted with a preponderance of dug wells in the Nobles County Survey.

From the data obtained on these two surveys, it appeared that school wells containing over 10 ppm. NO_3N occur less frequently than do comparable farm wells. It also appears that in the case of dug and of drilled wells, the location factor does not have too much bearing on whether the water will yield a high nitrate content or not.

In an attempt to further determine the effects of construction on the nitrate content of a well, two wells which were high in nitrate and which had been sampled over a period of at least six months, were reconstructed. The wells chosen were a satisfactorily located dug well of 30-foot depth located outside the city limits of New Ulm in Brown County, and a poorly located drilled well, 71 feet deep, located three miles southwest of Luverne in Rock County.

The upper ten feet of each well were reconstructed so as to eliminate the possibility of contamination entering the well from surface drainage. Sampling of the wells after reconstruction did not show a significant reduction in

the nitrate concentration. Therefore, contrary to work done by Sangor,[23] good construction for a depth of ten feet failed to exclude nitrate.

Effect of Depth and Type on Nitrate Concentration.—From a tabulation of the data obtained from all the well studies, it was apparent that there is a greater probability of high nitrate concentration occurring in shallow wells than in deep wells. Dug wells are more frequently the source of water high in nitrate than are drilled wells. It is significant that in the dug wells, a very large percentage (62 per cent) of the wells showing nitrates in excess of 10 parts per million were less than 75 feet in depth. In general, it can be said that, within the limits of this study, nitrate can be expected to occur more frequently in the shallow wells (75 feet or less) than in the deep wells.

Effect of Geology on Nitrate Concentration.—During the period January 1, 1947, to August 1, 1949, the laboratory made nitrate determinations on 2,912 water samples. Approximately 800 were submitted specifically for nitrate determination; the remainder were collected primarily for some other reason. Of these samples, 441 (15 per cent) collected from wells in fifty-five counties contained over 10 ppm. NO_3N. The highest concentration found in each county is charted in Figure 2. The white areas indicate counties in which the highest NO_3N concentration of samples included in this study is less than 10 ppm. The vertical-lined area, predominating in the southwest corner, indicates the occurrence of NO_3N concentrations of over 100 ppm. The southwestern section is the area from which most of the methemoglobinemia cases have been reported.

A review of the geology of the State of Minnesota shows that it is, for the most part, a heavily glaciated area, and that most instances where high nitrates have been encountered have been in wells drawing water from the drift. One characteristic common to the western portion of the state where high nitrates have been encountered is the heavy soil. Those counties which show less than ten parts per million nitrate nitrogen in the northern portion of the state very frequently have lighter soils containing considerable quantities of sand. At the present time, there are approximately ten counties in the southern half of the state which show no wells with concentrations of NO_3N over ten parts per million. It is not known whether more extensive studies would show similar results. Because of the peculiar distribution of water high in nitrates in Minnesota, it would appear that there are certain geological factors which are involved. What these factors are, and the nature of their operation, has not been established by this study.

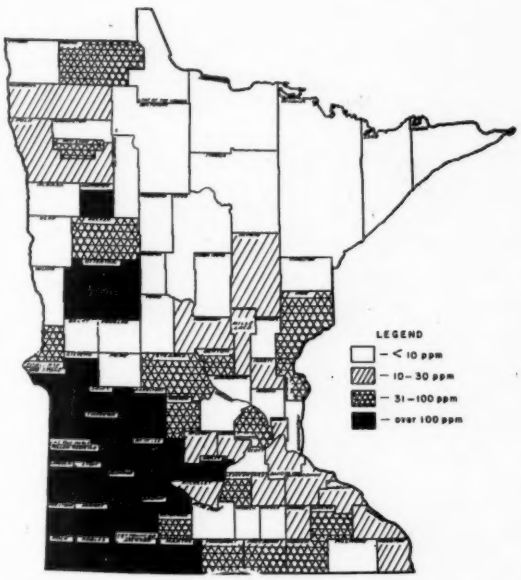

Fig. 2. Nitrate nitrogen concentration in well water. Highest concentration found in county, 1947-1949.

Summary

1. One hundred forty-six cases of methemoglobinemia, including fourteen deaths, due to nitrates in farm well water supplies in Minnesota are reported.

2. Dry and evaporated milk formulas as well as diluted cow's milk formulas which require large amounts of water as diluent are most dangerous.

3. Since no infants who were breast-fed, with one possible exception, developed methemoglobinemia, this would appear to be another argument in favor of breast feeding during the first two months of life, especially in rural areas.

4. Data are presented on water supplies suspected of being implicated in cases on infant methemoglobinemia in Minnesota. In all but two of these cases, the nitrate nitrogen content of the water was in excess of 20 ppm. In the two

exceptions mentioned, the clinical histories of the suspected cases were inconclusive.

5. Test runs on several wells did not show a significant change in the nitrate concentration with length of pumping.

6. Periodic sampling of municipal and private supplies over a one-year period indicate that the nitrate concentration of a well remains fairly constant and that significant seasonal variations do not occur.

7. Studies of rural school wells and similarly constructed nearby farm wells indicate that the nitrate content of the school well water was less than that of water from the farm wells.

8. Reconstruction of two wells failed to show, as some workers thought, that good well construction for a depth of ten feet could be expected to exclude nitrates.

9. Nitrates seem to occur more frequently in shallow wells (75 feet or less), than in deep wells.

10. No method was found by which nitrates could be removed from water. Recently Krueger[12] reported using the resin IRA-400 to remove nitrates from water. This resin works on the anion exchange principle which is similar to the cation exchange that takes place in zeolite softeners.

11. None of the cases of methemoglobinemia in Minnesota on which sufficient data were obtained occurred from using water containing less than 30 ppm. NO_3N in feeding an infant. However, 10 ppm. has been generally accepted as the point above which the water should be viewed with suspicion because of the possibility of a dangerous level being reached through other factors such as boiling.

* * *

Since this paper was written, four additional cases of methemoglobinemia have been reported to the Minnesota Department of Health.

Acknowledgment

H. M. Bosch, F. L. Woodward and H. R. Shipman of the Section of Environmental Sanitation, participated in the study. John Stam, M.D., Worthington Clinic, acted as Pediatric Consultant.

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PITUITARY ADRENOCORTICOTROPIC HORMONE (ACTH) IN ASTHMA

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FOLLOWING the elaboration and use of any therapeutic agent, extravagant claims are made. Certainly this has been the case with cortisone and pituitary adrenocorticotropic hormone (ACTH). The very grandeur of the vista unfolded by these agents and the possibilities inherent in them would make exaggeration almost impossible. It is the more advisable, therefore, to report failures as well as successes in their use.

Animals that have had an adrenalectomy show extreme susceptibility to anaphylactic shock as is well known and was long ago demonstrated but when these animals are given cortisone they are protected; and pretreatment injections of ACTH result in only minor reactions.[2] While we know comparatively little about the fundamental processes by which the adrenal corticosterones affect the great changes noted in the body, it is sufficient here to state that there is early in the course of treatment with ACTH or cortisone, physiological changes due to induced hyperactivity of the adrenal cortex; a fall in the eosinophile count; leukocytosis; sodium and chloride retention and associated water retention or excretion; elevated serum carbon-dioxide—combining powers; decreased sodium and chloride in the sweat; increases in urinary histamine, corticoides and seventeen keto steroids; increased gluconeogenesis with hyperglycemia; a diabetic-type of dextrose tolerance curve and increased deposition of liver glycogen; decreased inorganic serum phosphorous; increased uric acid excretion; decreased free serum cholesterol; increased calcium excretion; and a negative nitrogen balance.[4,5] In considering the effect of ACTH on allergic persons, in particular, we must also consider the euphoria induced, and the increased appetite and neuropsychiatric changes.[5] Interference with acetyl-choline cycle as reported by Torda and Wolff[9,10] with at times deficiency and at other times enhancement of *in vitro* synthesis is another important factor. Large doses of steroids have also been reported, by Selye,[8] as hypnotic in effect while Archer[1] in a recent letter in the *A.M.A. Journal* stresses the relationship of the pituitary adrenal axis to fat metabolism and to fatty infiltration of the liver—changes also associated with pregnancy and jaundice—conditions which at times benefit arthritis as well as asthma.

While the conditions treated with ACTH have included almost all serious ones the body is heir to, some of the most dramatic results have been reported in the field of allergy with just about 100 per cent at least encouraging though temporary results. Rose treated six patients with severe asthma.[7] The first two patients received 150 mg. of ACTH daily for two days and 100 mg. daily for two more days. The next four received 100 mg. daily for three days, 75 mg. daily for two days and 25 mg. the sixth day. He reports complete success in relief of asthma in four patients within forty-eight hours. The other two patients while not completely free of symptoms were decidedly improved. Though apparently only remissions, the results were certainly striking for the type of patients reported. Bordley[3] treated five patients with severe asthma with daily doses of 30 to 100 mg. of ACTH given at six hour intervals. Here also marked relief was obtained in four to forty-eight hours. Total ACTH given varied from 360 to 775 mg. Not only was the asthma relieved but in two patients nasal polyps disappeared though they recurred in twenty-three days and one month respectively. Randolph[6] reports thirteen cases of very serious asthma, two seasonal ragweed asthma and eleven perennial advanced cases of this disease. The majority would certainly be included in that terribly discouraging class of asthmatics referred to by Rockemann as "intrinsic;" and were further complicated by nasal polyps and aspirin sensitivity. As he points out these cases were chosen because of their very difficulty as diagnostic and therapeutic problems. Ten of these eleven severe asthmatics obtained marked relief of symptoms and remissions for from one week to five months following treatment with ACTH. Total dosage was 125 to 325 mg., while one patient could not be treated with the usual method and dosage due

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to fluid retention. The degree of relief varied from 50 per cent to complete comfort—the more satisfactory results being in patients with no clinical or x-ray evidence of emphysema, empyema or scarring. Even in those having recurrence of bronchial asthma after treatment, symptoms were "readily relieved following the inhalation of small amounts of epinephrine spray"—in decided though temporary contrast to the pretreatment condition. Their general status improved markedly—a condition not due to suggestion as placebos did not work in the same manner.

Because of these reports, it is to be understood that the privilege of being able to use this drug was greeted by me with great enthusiasm and anticipation. The first two patients, I decided, would be really "tough ones"—whom I had followed, and used up my total therapeutic armamentarium as well as that of other men in the field. As the material was to be given every six hours and in order to follow the response to treatment especially as to the eosinophile count (to be sure the adrenals did respond) the patients were placed in a hospital. This was done in spite of the fact that, as is well known, hospitalization and rest are often great therapeutic agents in themselves which could very easily confuse one as to the real agent responsible for improvement. In these people, however, because of the length of previous observation, I believed I could easily detect real improvement if it resulted as promised.

Case 1.—This patient, a man, aged forty-five, married, working in a furniture shop, has had asthma for twenty years. He has had a perennial associated stuffy nose with "sinusitis" for fifteen years. His asthma is aggravated by exertion, excitement, laughing, and changes of temperature. For the past ten years, he has had attacks at least once a night and he uses adrenalin by spray and aminophyllin suppositories with only partial relief. He was not appreciably improved by a stay in Arizona. Iodides, ephedrin, dietary regimes, desensitization with dust, fungi, vaccine, histamine have all been of little help. He has been hospitalized on many occassions and for varying periods for status asthmaticus. His past history is not remarkable except for nasal surgery fifteen years ago with poor results. His routine blood and urine were negative. The sedimentation rate was six. X-ray of the chest and electrocardiogram gave negative findings. This patient has been under my care since May 1949, and all usual procedures, including the antihistamine, antibarium, and antibiotic drugs were of no help. He was given 260 mg. of ACTH for a period of seventy-two hours with no marked benefit, on either the symptoms or vital capacity while in the hospital. That the adrenals did respond was shown by the drop in the total eosinophile count from 90 to 0. The drug was given every six hours.

Case 2.—This patient, a woman, aged forty-nine, married, a former nurse and present hotel proprietor, gives a history of asthma since 1943. She also had a perennial stuffy nose in 1947 and 1948 but no asthma at that time. The condition is aggravated by hard work, dust, colds, and cold air. Partial relief is at times obtained by aminophyllin, ephedrin, and adrenalin by hypo. The past history is not remarkable except for irrigation of the sinuses in 1949. The physical examination, x-ray, and electrocardiograms were normal. Routine blood and urine examination were not helpful. This patient has been under my care since January, 1950, and the usual procedures including elimination diets; sedation; desensitization with dust, fungi, vaccine, histamine; antihistamine, antibarium, and antibiotic drugs were tried but in May 1950, she became very seriously incapacitated by her condition and a trial of ACTH was advised. ACTH was given for 96 hours for a total of 360 mg. with no marked effect. The total eosinophile count showed the adrenalin stimulation by a marked drop from 16090 to 680 to 90 to 0. As a matter of fact she required repeated hypos of adrenalin and aminophyllin while being given ACTH as well as after treatment. The drug was given every six hours.

Case 3.—This patient, a man, aged fifty-six, married, is a patient of Dr. Henry Ulrich. He has had asthmatic attacks since January, 1950, and had a particularly difficult period while in Houston, Texas. His past history is non-contributory except that he has had nasal polyps for many years which have been removed periodically every six months. Duodenal ulcer in 1949 improved under diet. He is extremely sensitive to aspirin. He claims he is allergic to tomatoes. Physical examination was practically negative, except for nasal polyps. His chest, whenever examined, was clinically free from asthma. The usual therapy (bronchodilators) including rest and sedation improved the patient somewhat. After one week of hospitalization he was discharged on May 25, 1950. His routine blood and urine examinations were negative. The eosinophile count was 5 per cent. On June 2 and 3, he received 80 mg. of ACTH at twelve-hour intervals for four days. Three days later he reported no improvement in his attacks but he said his cough seems less and his polyps "were gone."

It is difficult for me to understand the effect of ACTH in these three cases of asthma—a disease in which therapy is very difficult to assay in view of the tremendous psychic factors. The dosage was as reported; the response of the adrenals was certainly there, as noted in the eosinophile counts. It also seems that, if relief is to be obtained,

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RENAL TUMORS

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THE FOLLOWING material resolves itself into a generalized discussion of renal tumors, which is a group none too common but most interesting. It is far from being exhaustive or even a beginning review of the literature on the subject, but if it does nothing more than give a brief review of their clinical and pathological features, their incidence, etiology, symptomatology and so forth, its aim will have been fulfilled. It is also an attempt to evaluate and correlate the pertinent facts about all the cases in the hospital records.

The cases surveyed were those dating back twenty-six years in the records of St. Mary's Hospital, Duluth, and include all kidney tumors that have been classified since the inception of adequate record room files. The cases in this survey include only those that have been proven to be kidney tumors, either by surgical removal and pathological specimen or at autopsy. Up to 1936, there were only twenty-five proven cases listed. So we see that over half of the cases have been recorded since that time. Better investigative urology and more autopsies have brought many to light, no doubt. The total series is not large but sufficiently comprehensive to justify some conclusions and we must not lose sight of the fact that their incidence in the realm of neoplasm is comparatively rare. Some of the cases, it is admitted, were not diagnosed clinically but were incidental findings in routine autopsies.

The classifications of renal tumors are almost as multiple as those of arthritis and much recently acquired knowledge as to their pathology has cleared up this phase considerably. There are both the malignant and the benign. From a standpoint of interest, a typical classification of renal new growths about thirty years ago was chiefly a pathological one. They were divided into three groups.

Group I—Composed of those that took their origin from the cells of the adult or fetal kidney. These were called "homologous" growths and consisted of:

A. Benign
   1. Connective tissue origin (fibroma, lipoma, fibrolipoma, angioma)
   2. Epithelial origin (papilloma, adenoma)

B. Malignant
   1. Connective tissue origin
      (a) round cell } mesodermal
      (b) spindle cell }
   2. Epithelial origin—epitheliomata or carcinoma.

Group II—Composed of those that take their origin from cells or tissues that do not belong to the kidney proper, but which have been included in this organ during its development. These were called "heterologous" growths and included:

A. Large fatty tumors, the "struma lipomatoides aberrata renis" of Grawitz which he described in 1883 and which are now termed hypernephromata, the name coined by Lubarsch in 1894.

B. Mixed growths
   (1) of muscle, bone, or cartilage.
   (2) rests from Wolffian body.
   (3) mesodermal rests—so-called Wilms' tumors.

Group III—Comprised of those enlargements which are tumors in a clinical sense only, and which form a pathological standpoint are retention cysts due to a non-patency of renal tubules.
   1. Single solitary cysts.
   2. Congenital cystic kidneys.

This is essentially an outmoded and bulky classification based on embryological etiology and derivation. Since Grawitz's paper of 1883, a tremendous amount of literature has accumulated dealing with classification, but most of the discussions are concerned with either disproving or proving the etiological adrenal rest theory of Grawitz. The latter's supporting arguments are:

1. Their position under the capsule of the kidney where adrenal rests are often found normally.
2. The cells of hypernephroma are similar in type to adrenal cells.
3. Characteristic fatty infiltration of the cells which is never found in kidney epithelium.
4. The presence of a limiting capsule around the tumor.
5. The arrangement of cells is similar to that in the adrenal cortex.

The opposition to Grawitz's hypothesis as advanced chiefly by Stoerck in 1908 and by Glynn in 1911 believe that:

1. Grawitz tumors are more frequent in the lower pole where adrenal rests are not found.
2. So-called fat cells of the hypernephroma are not fat but vacuolization related to the glycogen content of the cells.
3. It is a tumor of the cortex and not the capsule in which adrenal rests are formed.
4. That renal tumors never influence the growth of sexual characteristics as one would expect from superfluous adrenal tissue.
5. Finally, why should adrenal rests which are comparatively rare in the kidney produce hypernephroma which is the commonest kidney tumor while rests in other localities, although comparatively common, so rarely produce tumors?

TABLE I.

BENIGN	MALIGNANT
Adenoma	Hypernephroma-adenocarcinoma of renal cortex
Fibroma	Carcinoma
Lipoma	1. Adenocarcinoma-hypernephroma
Angioma	2. Papillary carcinoma
Papilloma (includes pelvis)	3. Squamous cell or Epithelioma
Cysts	Sarcoma
	1. Round
	2. Spindle
	3. Mixed
	Embryoma or Wilms' tumor
	1. Teratoma
	2. Rhabdomyoma
	3. Mixed tumors

TABLE II. PATHOLOGICAL INCIDENCE

	Garceau (Mass. Gen.)	Wilson (Rochester)	Smith (Mass. Gen.)	St. Mary's
Perirenal Sarcoma	1			1
Papilloma	1	3		
Hypernephroma	45–(53%)	71–(77%)	16–(40%)	34–(58%)
Carcinoma	3	5	7	2
Papillary Cystadenoma	4			
Papillary Adenomata	11			
Sarcoma	2	7	3	3
Lipoma	5			2
Fibroma	14	1	2 unknown	
Embryomata		3	1	6
Adenomata		1		
Adenocarcinoma			10	4
Papillary Carcinoma			3	4
Adenosarcoma				
Cystic Tumor (Reniculus)				1
				1
Totals	86	91	42	58

TABLE III.

	Barney	Braasch	Senator	Creevy	St. Mary's
Male	43 (58.1%)	51 (61%)	199 (65%)	59 (63%)	34 (59%)
Female	31 (41.9%)	32 (39%)	106 (35%)	35 (37%)	24 (41%)

At present, it may be stated that hypernephromas are peculiarly different histologically and stand out as a separate group. Their exact origin is still unsettled but there is now a fairly general acceptance of its renal rather than adrenal origin. The best grouping of kidney tumors to our mind, is not one which is on a pathological or etiological basis but a practical one of value clinically to the average practitioner who has forgotten a very liberal amount of pathological detail.

Table I constitutes a more simple and workable classification.

In incidence, hypernephroma is by far the most common in the adult while in children the embryomata or Wilms' tumor comprises the majority. Table II presents the incidence of tumor types for three other series in addition to our own.

It will be noted that in Smith's cases, the tumors are all malignant except two which were thought to be fibromas and, furthermore, that hypernephroma is the most common in all series. The percentage of these in our series, that is 58 per cent, is similar to the others. The average percentage of incidence in the four series is 57 per cent. The incidence of other tumor types in the various series differ widely sometimes, but this is probably due, in part, to the fact that different pathologists, each having their own individualities in pathological judgment and criteria, made the diagnoses. A microscopic section to one may appear as an adenocarcinoma while by another it may be interpreted as a cystadenocarcinoma, etc.

Let us consider incidence from the standpoint of sex. Most writers state that males are affected more than females, offering no explanation for this difference (Table III).

Heredity and trauma are not causative factors but trauma may be a precipitating cause of hemorrhage in a tumor already existent. Kraft reports a case of a man being struck by a plow following which he developed a mass in the flank. This remained the same for eighteen years but later

at operation, there proved to be a superimposed medullary carcinoma. In our series, a man kicked by a cow nine months previously developed a carcinoma of the renal pelvis, but, of course, this may have been coincidental. It could be significant.

hematuria in only one of forty-one in children and two French writers in 39 and 29 per cent respectively. As far as I could determine, no gross hematuria was recorded in our small group of children.

TABLE IV.

Years	Senator	Koster's Table (Keyes)	Creevy	St. Mary's
0–9	157	169		7
10–19	15		1	1
20–29	34		3	1
30–39	45		2	
40–49	42	125	22	8
50–59	96		22	17
60–69	57	128	30	18
70–79	13		1	5
80–89				1
	459	422	81	58

In Table IV, it will be seen that renal tumors are most prevalent during childhood and late adult life. At St. Mary's forty-nine of the fifty-eight cases were in patients over forty years of age.

Kelynack has also tabulated 160 cases, more than half of which occurred in the first decade of life; only fifteen between the ages of nine and thirty-five; and of the rest, over 50 per cent between the ages forty-five and sixty. Walker reports that almost all sarcomas occur in children before the fifth year (116 out of 138 cases). At St. Mary's three sarcomas occurred in adults and three in children.

Symptoms

The symptomatology of renal tumor is well defined. Hematuria, pain and tumor mass are the classical triad but it is not obligative that all these be present. When all are present, the growth is far advanced and beyond cure. *Hematuria is the most important symptom.* In eighty-three cases, Braasch found the first presenting symptom to be hematuria in 47 per cent, pain in 32 per cent and tumor in 15 per cent. Hinman found all three sypmtoms in 38 per cent. At St. Mary's, pain was present in 58 per cent, hematuria in 45 per cent and mass both subjectively or objectively palpated in 48 per cent. All three symptoms were found in only 6 per cent of the St. Mary's group. Hematuria in the beginning may be only microscopic but gross hemorrhage often results in clot formation with ensuing renal colic as the clots pass down the ureter. Bleeding may be spontaneous, and recur at long intervals of time which may lead to procrastination as to timely and proper investigation. In children, hematuria is notoriously absent. Dexter found

The second striking symptom is tumor mass which on palpation may be hard and nodular or soft and smooth. Many of the patients are aware of this mass and others experience only abdominal discomfort or fullness. Before extension outside the kidney, it is usually movable. With proper technique, that is, bimanual pressure, at the end of deep inspiration, with the patient in the lateral prone position, Israel was able to palpate enlargement in sixty-two of sixty-eight cases and Smith in sixty-eight of eighty or 84 per cent. "Ballotment renale" or Guyon's sign is sometimes elicited. In the St. Mary's series, tumor was found in 48 per cent.

Pain is probably the least diagnostic symptom. When not due to clot-passing with typical renal colic, a constant dull ache may be due to hydronephrosis, pull on the renal pedicle, or to involvement of adjacent nerves. There may also be pressure symptoms such as varicocele, due to compression of the spermatic veins or ascites and edema of extremities by pressure on the larger intro-abdominal veins. Intestinal obstruction may be caused by tumor pressure. Other associated symptoms, and sometimes the presenting symptoms, are gastrointestinal disturbances such as anorexia, indigestion, constipation, or diarrhea. Jaundice may be present if a right sided growth has extended to the liver. In the late stages, anemia and cachexia predominate. Patients presenting these symptoms are the ones in whom valuable time has been lost in arriving at a diagnosis and the ultimate prognosis thereby made worse. In a few cases, the symptoms from metastases to lungs and bone may be the first indication of the presence of the lesion. In one of our

cases, a pyelonephritis of the opposite kidney obscured the true diagnosis for several months.

Fortunately, rapid avdances in the betterment of cystoscopic instruments and technique, have greatly facilitated the diagnosis of renal tumors. Before the development of intravenous pyelography, many cases of tumor were not diagnosed early because more troublesome cystoscopy was repeatedly postponed. It must be emphasized that all hematurias, painless or otherwise, should have exhaustive investigation and not be lightly passed off with the admonition that "if it happens again we'll look into it more thoroughly." It may be too late then for permanent cure. Retrograde pyelography has no peer but the intravenous technique is helpful as corroborative evidence and as a screening test. A negative intravenous pyelogram, however, should not be considered conclusive.

Too much reliance, on the other hand, must not be placed on a definite diagnosis from a pyelogram alone. Few show absolutely typical pictures with "spider leg" deformity of the calices, but the greater number show only partial filling defects of the pelvis. In practically all of our series, the x-ray diagnosis was merely "filling defect of the renal pelvis." Therefore, we see that the history and clinical findings, cystoscopy with pyelography and renal function determination are equally indispensable for early diagnosis.

A few more facts about the St. Mary's series. Presenting symptoms had been present for an average of about forty weeks. There were twenty-seven cases with proven metastases, or 49 per cent. These metastases were chiefly to the lung in thirteen cases or 45 per cent, to the bones in eleven cases or 40 per cent, to the lymph glands in eight cases or 30 per cent, and to the liver in five cases or 22 per cent. The bone metastases were chiefly to the spine and pelvis; one to the jaw and several to the ribs. Lymph gland involvement is usually to the retroperitoneal, cervical or mediastinal nodes. Renal function determinations such as P.S.P., indigo carmine, and blood chemistries were done in only twenty-seven or 47 per cent. It would seem that these procedures should have been done more frequently as part of a thorough urological investigation, even though not much information is usually gleaned from this source. Generally speaking, these function tests were usually reduced on the side of the lesion but rarely were the blood metabolites elevated, which is what we would expect with the other remaining kidney present and normal. Blood chemistries were done in only twenty-five cases. It is amazing that more blood chemistries were not done prior to nephrectomy because the latter would certainly be contraindicated in a semiuremic or uremic surgical risk. One such instance occurred where a nephrectomy was done in a case with an admission blood urea nitrogen of 76 and a creatinine of six- with death on the first postoperative day. Certainly, this was poor surgical judgment.

Associated diseases were irrelevant and commonplace but hypertension and urinary tract infection were quite prevalent. Varicoceles were present in two patients, and it is interesting to note that one case of adenosarcoma in a three-year-old was superimposed on a horseshoe kidney. The average hemoglobin was 62 per cent and the red blood cells 3.36. Positive urinary findings, either r.b.c., w.b.c. or albumin were present in 64 per cent. Three biopsies of a cervical gland, of bone and of the liver confirmed the diagnosis of hypernephroma in three instances. In one patient, simple pyelotomy was done for palliation.

Concerning the treatment of renal neoplasms, suffice it to say that early surgery plus preoperative or postoperative radiation or both, offers the only chance of complete cure. And, of course, it must be taken for granted that the kidney function in the remaining kidney is compatible with life. A thorough study should be made for metastases and many writers feel that even the presence of small or early metastases does not necessarily contraindicate nephrectomy.

Creevy believes that irradiation of metastases and recurrences is of definite value. Whether life is prolonged is debatable but there can be no doubt as to its palliative values in reducing pain. Dean believes that pulmonary metastases are radio sensitive and that bone lesions are not. Creevy believes they both respond equally. Most men feel that x-ray generally does not appreciably affect the percentage of cures. One point of note is that preoperative radiation may reduce a tumor in size to the point where it may be operable, whereas previously it was not. It seems to be rather generally agreed that x-ray treatment is most useful and is the best treatment for Wilms' tumor. Many men state that surgery is of no avail but it seems to me that every early case should have the benefit of surgery. Better results from x-ray therapy at

the present day is expected because of improved techniques, high voltage machines, et cetera.

The percentage of five-year cures by all types of therapy are not too encouraging. The over-all average of five-year cures in percentage from a series of cases reported by Walters, Priestly, Braasch, Hyman and about five other authors is 23 per cent. This low percentage certainly speaks eloquently for early diagnosis. I could find no report of a five-year cure for a Wilms' tumor.

In the cases at St. Mary's, nephrectomy was done in 55 per cent. X-ray therapy was used in only 21 per cent of the cases. It was not possible to arrive at any definite percentage of five-year cures because of the insufficiency of follow-up data on the charts.

Conclusions

1. Much progress has been made in the classification and etiology of renal neoplasms in the last twenty years. The renal origin of hypernephroma is more tenable.

2. The classical symptomatic triad is pain, hematuria and mass and when all are present, the tumor is beyond all hope of cure.

3. Generally speaking, our cases compare favorably with other series reported as to age, incidence, tumor types and symptoms.

4. Surgery, if it is to be of any avail, must be done early and small metastases do not necessarily preclude surgery.

5. X-ray is a valuable adjunct to surgery and that it reduces pain, also.

6. Every case presenting one or more of the classical renal symptom triads should be cystoscoped immediately and studied urologically.

7. The charts studied in the series at St. Mary's were deficient chiefly in two categories:

(1) Poor follow-ups for evaluation of therapy and estimation of five-year cures.

(2) Many tests and investigative procedures done before admission had not been recorded and were, therefore, unknown. Incorporation on the hospital chart of such data would be of inestimable value in any statistical analysis.

PITUITARY ADRENOCORTICOTROPIC HORMONE

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we should get it fairly soon, as has been reported. Furthermore these patients did not have emphysema or other pulmonary diseases. Perhaps more prolonged or more intensive treatment is indicated. At any rate, here are three patients with severe asthma who did not respond to ACTH—a rarity, at least at present, in the literature of this remarkable drug.

Acknowledgment

I wish to thank Dr. Henry Ulrich for the use of the data on his case, and Dr. Edmund Flink for furnishing the ACTH.

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History of Medicine In Minnesota

MEDICINE AND ITS PRACTITIONERS IN OLMSTED COUNTY PRIOR TO 1900

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Rochester, Minnesota

(Continued from July issue)

Lucy J. Bolt (Mrs. James H.) Easton, "magnetic healer" and "clairvoyant healer," holder of state exemption certificate No. 179-3 (filed in Olmsted County on October 23, 1883), was from the early eighteen sixties into the first decade of the twentieth century a practitioner in Olmsted County, in and near Rochester. She was a handsome woman, tall, large and blonde, kindly and sincere, an interesting character. Although conflicting statements are heard as to her merits as a practitioner, there is agreement that she had a large clientele who believed in her healing powers, and that certain established physicians of the regular school, although they would not consult with her, nevertheless on occasion advised patients to go to her, not for physical healing but "for the psychologic effect." As a highly respected person has said, "She really was magnetic and had a sense of diagnosis and treatment." One has only to mention her to old residents to hear anecdotes about her procedures and beliefs as a healer, and about her eccentricities; for example, she raised innumerable canaries, using the family living rooms as an aviary.

Lucy J. Bolt was born in New York State and came with her parents, pioneer farmers, to St. Charles Township, Winona County, in the early fifties. In 1856 she was the second teacher to preside over the district school of the township; in the autumn of that year she was married to James H. Easton, who was by turns innkeeper, farmer and photographer. Mr. Easton was a native of Massachusetts, it is said, the son of an itinerant herb doctor and journeyman carpenter, who sometimes was employed as a workman in the East by Henry Wadsworth Longfellow. The only child of James and Lucy Easton was James Hamlet Eugene Bolt Easton, born about 1859, whose magnificent baritone voice gave him place at social, church and public functions and supported him during his seven years as a law student (non-graduate) at Harvard University. In that period, the late seventies and early eighties, he once was a guest at the Longfellow home; the poet was interested, the story goes, in hearing from a native Minnesotan how "Hiawatha" was regarded in its locale.

In 1860 Mr. and Mrs. Easton established "the first art gallery" in St. Charles; in December, 1862, in Rochester, they were erecting a building on Broadway to house their photographic equipment. In the next decades, with Lucy Easton always her husband's assistant as well as a practitioner, they were in different locations. Sometimes the gallery was their home, and for many years they lived on their farm, three miles south of town on what is now Highway No. 63. By the eighties the Eastons had become the owners, and Hamlet the driver, of blooded horses, which they entered in races over a

wide circuit of noted tracks in many states, with varying profit and loss. Of their horses, Badge, a splendid black pacer, "put Rochester on the map as far as turfmen's eyes were concerned." Others were Lebbius I. (originally from Eyota and named for Lebbius I. Ingham, a leading citizen of that village), Hal Crags and Pico. In August, 1896, the *American Sportsman,* quoted by the *Rochester Post,* declared that on every day that Badge was to race, Mrs. Easton would hold a séance and would telegraph her son the spirits' dictum, so that he might govern his pool of tickets accordingly.

From her ealiest arrival in Rochester, it has been recalled, Mrs. Easton held séances and began her magnetic healing, but it was not until later that she styled herself a practitioner of medicine and probably not until the eighties, after she had received her state exemption certificate, that she assumed the title of "doctor." In August, 1887, when her controversy with the city council was being aired in the *Rochester Post,* she stated, "Although I have practiced the healing art in this city upwards of seven years, I have never, nor have friends of my patients had occasion (except in a single instance) to send for an undertaker where the case has terminated in my hands." This was with regard to her alleged opinion on the condition of a young man who had been injured on July 4 by a gunpowder explosion when a cannon was fired during a civic celebration. The patient's mother had rejected the services of Dr. W. W. Mayo, "would have nobody but Mrs. Easton." Mrs. Easton, it was stated, had declared the patient dead and had sent for the undertaker, and had in due time presented a bill of $20 to the city. The report continued, "The council would pay for a physician, but would not pay for Mrs. Easton." An additional note was that when Mrs. Easton had left the patient's home, Dr. E. W. Cross was called, and that the patient was restored to health.

Many of Mrs. Easton's patients consulted her at the studio or the home, but often she was called into the city and the countryside. An early resident of Rochester, Oliver J. Niles, of Grand Rapids, then a boy in his teens, has said that when the Eastons were living on the farm, he often was sent out by different Rochester citizens, persons of comfortable circumstances and unquestioned judgment, to summon Mrs. Easton. In the office she conducted her treatments unaided; whenever she was called to the home of a patient, her husband accompanied her, and his knowledge of medicinal herbs that he had gained from his father was combined with her magnetic powers.

In the last years of the Eastons' life in Rochester their fortunes declined. In 1909 the noble racehorse Badge died. Before 1911 the family had removed to Florida.

Roswell Eaton (1823-1884), a resident of Rochester, Minnesota, from 1867 to 1884, did not practice his profession actively in the city. He was born in Sardinia, Erie County, New York, in 1823, and in 1841 removed with his parents to Walworth, Wisconsin. At Geneva, Wisconsin, he studied medicine with a Dr. Palmer, before attending lectures "at the medical college, Chicago, from which institution he graduated in 1856." He practiced medicine in Sharon, Wisconsin, for the next ten years, and in 1867 came to Rochester accompanied by his wife, Patience Matteson Eaton, a native of Shaftsbury, Vermont, to whom he was married at Sharon in 1857. There were no children of the marriage.

In Olmsted County, living on a tract of land at the northern limits of Rochester, Dr. Eaton had his chief interest in farming and dairying. His name ap-

peared often in the newspapers of the city in connection with the Farmers Institute, a creamery in Rochester, and so forth. In the great cyclone of August 21, 1883, his house and barn were demolished and Dr. Eaton, carried several rods with the debris, was injured severely. On September 14, 1884, while helping a threshing crew on his place, he died suddenly from heart failure. In his obituary he was described as having been a Baptist, an upright citizen, a scholarly and well-informed man. Patience Matteson Eaton survived him twenty years, dying in early March, 1904, at the age of eighty-three years; her only surviving relative was her brother, Langford Matteson, a farmer north of Rochester.

Cyrus Bowers Eby (1872-1934) was the fifteenth appointee, in July, 1893, as an assistant physician on the staff of the Rochester State Hospital, Olmsted County.

It is well known that Dr. Cyrus B. Eby for nearly thirty-three years, from 1901 until his death, was a loved and honored physician of Fillmore County. It perhaps is not so well known that for nine years, three as a medical student and six as a physician, he was associated with Olmsted County. In an article, "Notes on the History of Medicine in Fillmore County Prior to 1900" (Guthrey) there appeared a sketch of Dr. John Robert Eby, elder brother of Dr. Cyrus B. Eby, which included detailed information on the Eby family and tribute to Dr. C. B. Eby as a physician of Fillmore County *after* 1900.

The fifth of seven children, Cyrus Bowers Eby was a son of Aaron Eby, M.D., physician and writer, and Matilda Croft Bowers Eby. He was born in Sebringville, Perth County, Ontario, Canada, on December 9, 1872, and received his early education in the public school at Sebringville. Later he attended Stratford Collegiate Institute, Stratford, Ontario, from which he was graduated in 1889. Soon afterward he came with his brother John Robert to Minnesota, where his uncle, Dr. Jacob Eton Bowers (q.v.) a distinguished alienist, had been established since 1868 (the first superintendent and chief physician of the state hospital in Rochester from January, 1879, to October, 1889).

During the summer of 1889 and during vacations in subsequent summers, Cyrus B. Eby was employed as a clerk, as was his brother before him, in the drug room of the state hospital. In the autumn of 1889 the brothers matriculated in the medical department of the University of Minnesota for a course of three years, which they completed in 1893. Cyrus B. Eby, an honor student and a member of medical fraternity Nu Sigma Nu, was then only twenty years old, so that he was obliged to wait until his majority to obtain his Minnesota state license to practice medicine.

Dr. Eby came to Rochester on graduation and, it is said, was employed at the state hospital as an intern until his appointment as an assistant physician could become effective. His years in Rochester were marked by able professional work and study and by the activity in medical societies that continued all his life. He was in due time a member of the official medical societies of Olmsted County and of Fillmore County and of the Olmsted-Houston-Fillmore-Dodge County Medical Society, and of the Southern Minnesota Medical Association, the state medical association and the American Medical Association.

On July 8, 1896, Cyrus B. Eby was married to Laura Blanche Bamber, of Rochester. Mrs. Eby was one of the eight children of Dr. Archibald Bamber,

a pioneer dentist of Rochester, and Susan L. House Bamber, who was a native of Dixon, Illinois, a daughter of John W. House and Mary A. House. The parents of Archibald Bamber were John Bamber and Lucy Whitney Bamber, who came to Rochester from Ohio in December, 1854, and pre-empted farm lands bordering the Zumbro River near the city; John Bamber was the son of David Bamber, native of Londonderry, Ireland, who came to Herkimer County, New York, in 1798.

Early in 1898, Dr. Eby took a postgraduate course in the diseases of children, at the New York Polyclinic Medical School and Hospital. In February, 1899, he resigned his position at the state hospital and entered private practice at Hospers, Iowa. Later in 1899 he went into northern Minnesota, where for a time he was mine physician at Mountain Iron. Early in July, 1901, Dr. and Mrs. Eby with their young daughter and their infant son settled in Spring Valley, Fillmore County, Minnesota.

For many years Dr. Eby was a member of the board of health of Spring Valley and a county physician. During World War I he carried the burden of practice while other local physicians were in military service, and was medical examiner for the local draft board. He was a member of fraternal organizations, among them the Masonic Lodge (A. F. and A. M.), and was an active worker in the Baptist Church. A talented and enthusiastic gardener, he beautifully landscaped the grounds of the church as well as the grounds of his home. His chief happiness was in his family and home, his recreation in nature study and fishing.

Dr. Eby's hesitancy to send bills or to ask payment of his fees was common knowledge. A favorite story in his family was of the almost unique occasion, in the lean years of the early nineteen thirties, on which he determined to ask a certain farmer for a payment on bill of long standing. When he called at the home, the farmer was away, and Dr. Eby therefore explained his errand to the man's wife. She said, "Oh, I am sure Tony couldn't pay you anything now, because he had trouble getting money together to go on this fishing trip." Dr. Eby said no more; probably he felt some little sympathy with his fellow enthusiast.

Kindly, even-tempered, and selfless in his devotion to his work, an able and ethical member of his profession, a general practitioner of the highest type, Dr. Eby held the friendship and esteem of his colleagues as a man and their respect as a physician. To his patients he was friend and much sought adviser in their personal affairs as well as doctor. He is remembered perhaps especially for his consideration of the needy sick and for his love of little children and his skill in caring for them.

Dr. Eby died on January 20, 1934. Although not well, he had answered a call some ten miles in the country; the road was blocked with drifts, he was alone in his automobile, and in order to get through had to shovel snow and to apply tire chains and, when one chain was lost, to wind rope around the tire. When he arrived at his destination he tried to conceal his exhaustion. As he sat in a chair drawn up to the patient's bedside, he remarked that he had "a little heart trouble," and fell forward in death. In a memorial tribute published in MINNESOTA MEDICINE it was written of him "Words cannot add to the nobility of Dr. Eby's life. Most doctors would envy the way of his life and its ending."

Dr. Cyrus Bowers Eby was survived by his wife, Blanche Bamber Eby; a daughter, Esther E. Eby, member of the faculty of the University of Houston,

Houston, Texas; a son, Robert A. Eby, of Duluth; two brothers, John Robert Eby, M.D., of Elko, Nevada, and Frederick Eby, Ph.D., LL.D., of Austin, Texas; and two sisters, M. Dorothy and Grace D. Eby, both of Trenton, New Jersey. Mrs. C. B. Eby died on April 20, 1941. Of the relatives named here, there were living in 1946, at the addresses given, Miss Esther E. Eby, Robert A. Eby, Frederick Eby, and Miss Grace D. Eby.

Alexander Elder around 1865 relinquished his medical practice in New York City and came to Rochester, Minnesota, where his brothers James and William had established a mercantile business. A third brother, John, was a farmer near by in Cascade Township. Dr. Elder practiced medicine in Rochester perhaps two or three years before he removed to Eyota to make his home with his daugher, Mrs. C. Smith Andrews. Later he divided his time between Minnesota and New Jersey.

A reference to him as a physician is that of Charles Nicholas Ainslie, in his privately printed memoirs, At the Turn of a Century (1938). Charles Ainslie never forgot a morning on which the temperature was 20 degrees below zero, when he, a small boy, "was bundled up to walk more than two miles on a road drifted during the night, to get word to Dr. Elder . . . to come and relieve father," who had suffered all night. "Father" was the Reverend George Ainslie, as stated earlier, the first Presbyterian minister in Rochester; the Ainslie family then lived in a farm home at the foot of Indian Ridge north of town.

Early in 1875 the *Rochester Post* carried a notice of the sudden death of Dr. Alexander Elder, from heart disease, on February 3, at the home of his daughter at Westfield, New Jersey: "He was a gentleman of superior scholastic acquirements and sterling character."

Ziba H. Evans, a graduate of the Medical Department of the University of Buffalo (New York) in 1872, practiced medicine briefly in Rochester, Minnesota, in the summer of 1879; in August, after six weeks, he left for Elk River, Michigan, to take the position of physician and surgeon for a large rolling mill in that city. Official medical directories show that he was licensed in Michigan in 1902 and that from 1906 or earlier, through 1916, he was a practitioner in Traverse City, Michigan.

L. E. (Leo Ervin Oscar) Evens, a graduate of the St. Louis College of Physicians and Surgeons early in 1897, came that spring from Alexandria, Minnesota, to Rochester. For several weeks in May and June, resident at the Rochester Hotel, he served as locum tenens for Dr. H. H. Witherstine while the doctor was in the East at a meeting of the American Medical Association and on vacation. When Dr. Evens left for Iowa in September, the *Olmsted County Democrat* stated that he had been several months "at St. Mary's" and, as stated, in charge of Dr. Witherstine's office. During his stay in Rochester he became a member of the Southern Minnesota Medical Association, at the sixth annual meeting, at Winona, on August 5, 1897. Dr. Evens was licensed in Iowa in 1897 and in the next twenty years practiced at different towns in the state, Osage, Cedar Rapids and Waterloo. Subsequently he was in Chicago and in Hartford, Connecticut. His death occurred suddenly in California in April, 1934, when he was in his early sixties.

David Sturges Fairchild (1847-1930), a pioneer physician in the village of High Forest, Olmsted County, from 1869 into 1872, lived most of his distin-

guished professional life in Iowa: in Ames from 1872 to 1893, in Clinton from 1893 to 1930. He was honored in life and has been commemorated since death for his great contributions to the art and science of medicine and surgery and to their literature. Dr. Fairchild's History of Medicine in Iowa (1927) is a monument to him. Certain of his special articles, inimitable reminiscences, give a graphic picture of early conditions of practice in southern Minnesota and particularly in the Olmsted County of the early seventies.

The son of Eli Fairchild and Grace Diamond Sturges Fairchild, David Sturges Fairchild was born on a Vermont farm near the village of Fairfield on September 16, 1847. He came of fine lineage and was reared in a fine tradition. He received his earliest schooling near home and in his fifteenth year began his formal education at Franklin Academy, in a Vermont village near the Canadian border. Two years at Franklin were followed by a year at Barre Academy, a year of teaching district school ("The conditions and compensations of a Vermont district school teacher were less attractive than of a farm laborer."), and a period as apprentice to an established physician during which he read anatomy, physiology and materia medica as set forth by Gray, Dalton and Wood respectively. In the autumn of 1866 he entered the medical school of the University of Michigan, which he found crowded by 525 students, many of them resuming medical study that had been interrupted by military service during the Civil War. He returned to Ann Arbor in September, 1867, for a second term but, finding the school temporarily disrupted by a dispute over homeopathy, he transferred to the Albany (New York) Medical College, from which he was graduated on December 23, 1868.

Following the advice of his friend, Dr. Burney J. Kendall, who had studied with a physician in a neighboring community in Vermont and was now practicing medicine in the village of Marion, Olmsted County, Minnesota, Dr. Fairchild in April, 1869, came to Olmsted County and by May 1 had settled in High Forest. Twenty-three years old, very blond, carefully groomed, his costume made impressive by a plug hat and a Prince Albert coat, he arrived in High Forest on horseback. He was courteous, friendly and tolerant, in a reserved New England way, and was obviously of culture and education superior to that of most of the local settlers. He was needed and welcomed in the community but withal he was eyed with some skepticism and was greeted with greater familiarity than he could at first enjoy; the title "Doc" had no virtue in his ears. Until then the community either had accepted the uncertain services of the local incumbents (one qualified but inactive, one a bluff army surgeon of sketchy training), or sent when in real need for one of the established physicians of Rochester, fifteen miles away. The new "doc" had not an easy role.

Dr. William W. Mayo, of Rochester, proved to be a kind and helpful friend who initiated the young physician into country practice and on occasion so maneuvered as to concentrate attention on the boy's professional ability, in a generous spirit that Dr. Fairchild never forgot. At the older man's suggestion he joined the Olmsted County Medical Society, attending the meetings in Rochester when roads and practice permitted: "The most important events so far as my memory goes were the occasional invitations to dinner at Dr. Mayo's home, where I saw W. J. and C. H. running about in short pants." These brothers in their adult years were among his closest friends to the end of his life. In June, 1871, at Minneapolis, Dr. Fairchild became a member of the Minnesota State Medical Society, and he was present at three other meet-

ings semi-annual and annual, within the next year. From those sessions he recalled with affection many men whose names are known throughout the state, from the Twin Cities and from various southern counties; here are mentioned only men from Olmsted County, Drs. Edwin C. and Elisha W. Cross, Dr. Hector Galloway, and Dr. W. W. Mayo, all of Rochester.

In those years "there was no science of medicine." Dr. Fairchild possessed a few established works, he later said, on the practice of medicine, on materia medica and therapeutics and obstetrics, which he read more or less secretly, "for it was believed by many people that a doctor must know all about medicine from experience and natural gifts in understanding of the mysteries of disease." Because he felt the need of further knowledge he joined medical societies and subscribed to the best medical journals available.

At High Forest on May 1, 1870, David S. Fairchild was married to Wilhelmina C. Tattersall of that village, a daughter of Captain William K. Tattersall, one of Olmsted County's earliest and most notable citizens. William K. Tattersall (1814-1893), a native of England, when an infant came to New York State with his parents; in 1856 he traveled to Minnesota and settled in High Forest and in that year built the Tattersall House, which for decades was to be a famed hostelry (the building was razed in 1946). He was a Civil War veteran, civic officer, postmaster, and member of the Minnesota legislature.

In 1872, after a little more than three years, Dr. Fairchild had become well established in the confidence, liking and respect of the community and of the profession of county and state. He had his own drugstore and he took part in civic affairs; in June, 1872, he served as grand juror from the county to the United States Circuit Court at Saint Paul. But he realized, and his wife concurred, that High Forest, past its zenith and without likelihood of gaining a railroad, held no future for a professional man, and he cast about for a new location. At this time Dr. Albert Richmond, of Ames, Iowa, a college classmate of Dr. Fairchild at Ann Arbor, was returning to his early home in Rochester, Vermont, and he wrote urging Dr. Fairchild to settle in Ames, to succeed him in practice. So it was that on July 10, 1872, Dr. and Mrs. Fairchild with their infant son, David S. Fairchild, Jr., started with a horse and buggy for Ames. The story of that eventful trip is well told in Dr. Fairchild's memoirs. The story of his subsequent life and work is well known and is recorded in the annals of medicine in Iowa.

When Dr. David S. Fairchild died in Clinton, Iowa, on March 22, 1930, from thrombosis, he was survived by his wife, Wilhelmina Tattersall Fairchild, by their son Dr. David S. Fairchild, Jr., of New York City, and two daughters, Margaret Fairchild Reynolds, wife of Dr. H. R. Reynolds, of Battle Creek, Michigan, and Gertrude Fairchild Brown, wife of A. W. Brown, of Davenport, Iowa, and Tucson, Arizona. Mrs. Fairchild died in Clinton on April 23, 1943, at the age of ninety-two years. Earlier, on November 18, 1940, Dr. D. S. Fairchild, Jr., died in an automobile accident, at the age of sixty-nine years. A colonel in the United States Army Medical Reserve Corps, he had been recalled to service and was on his way to Washington, D. C., when the accident happened; his service during World War I, as chief surgeon to the famed Rainboy Division, is a matter of record. In 1945 David S. Fairchild, III, son of Colonel Fairchild, was with the United States Army in Germany; Mrs. Reynolds and Mrs. Brown were in their former places of residence. A grandson of Mr. and Mrs. Brown is David Fairchild IV Salter.

(To be continued in the September issue.)

President's Letter

POSTPONED HEALTH PROBLEMS

Postponement of health needs is one of the most dangerous and deeply rooted problems confronting the medical profession today.

Patients defer a visit to the family doctor because they're "sure to feel better tomorrow"; and the price they pay, in suffering and extended convalescences, doesn't seem to change this practice of procrastination.

The same habit, with one variation, applies to the children of these "wait-and-see" patients. The exception is that medical supervision of infants has become an accustomed rule—Minnesota's outstanding record of maternal and infant health bears out this truth here—but after the child is old enough to walk, he apparently is considered safely on his way to maturity. The regular health check-up is forgotten; the youngster is given medical attention only when he is clearly and unmistakably ill.

The lapse in medical supervision between the ages of two and five or two and six is still a critical problem; but its consequences have been mitigated by the annual summer round-up. Through this school health program, the diagnostic tools of medical science operate with speed and assurance to help junior citizens reach and enjoy healthy maturity.

Useful by-products of the round-up include the children's recognition of the necessity for good nutrition, adequate rest and clothing, cleanliness and regular check-ups. They gain valuable knowledge of body mechanism and, often most important of all, they learn to accept the physician as a friend, someone whose help is to be welcomed, not feared.

If the school health program is beginning now in your community, it deserves your co-operation. If your locality hasn't developed a round-up plan for health examinations, why not help to organize one?

President, Minnesota State Medical Association

Editorial

CARL B. DRAKE, M.D., *Editor;* GEORGE EARL, M.D., HENRY L. ULRICH, M.D., *Associate Editors*

REGULATION OF DRUGS AND MATERIALS USED IN THE HOME

WE NOTE that our Senator Humphrey has submitted a bill to the Senate (S 3852) permitting oral authorization for the dispensing and refilling of certain prescriptions, providing a written prescription is supplied later. At present, it is illegal for a druggist to fill a first prescription for a narcotic or barbiturate without having the written prescription in his hands. What is also irritating to the physician and, doubtless, more so to the druggist is that while a prescription containing a barbiturate can be refilled by the druggist upon verbal authority from the physician over the telephone, this is not allowed for refills containing a narcotic. A written prescription must be in the hands of the druggist before he can dispense an original or a refill of a narcotic prescription.

As a result of such a stringent regulation, which is so often impractical to observe, the law is broken right and left. Imagine a dentist called by telephone after office hours for relief of a toothache. In order to provide a remedy containing a narcotic, some arrangement has to be made to transport a written prescription from the dentist to the druggist before the druggist is allowed legally to dispense the drug. A physician is called upon during the day or, as so often happens, in the evening to supply a cough syrup which, in his opinion, should contain more than the maximum grain to the ounce allowed without the narcotic prescription. The mechanism of supplying the druggist with a written prescription before the patient obtains the remedy, as provided by regulation, is most cumbersome and irritating to everyone concerned.

Admittedly stringent regulations of habit-forming drugs, such as the opiates and barbiturates, are necessary. Their use, particularly the use of the barbiturates with suicidal intent, has become so common as to constitute a problem. Perhaps one-seventh to one-fifth of suicides are due to barbiturates. These are not the only drugs, however, which may be lethal when taken in overdosage. A drug dispensed by written prescription is just as lethal as one authorized by telephone pending the mailing of the prescription. Because a druggist has been occasionally duped by a drug addict impersonating a physician over the telephone scarcely justifies this stringent regulation, the full observance of which seems unreasonable to expect. Although we agree, one hundred per cent, that regulation of drug traffic is necessary, laws however strict cannot wholly prevent the intentional overdosage of certain drugs with suicidal intent.

When it comes to accidental poisoning, particularly of young children who help themselves to pills and solutions found within and without the medicine cabinet, the list is long. It is surprising to note that not so many years ago strychnine poisoning constituted about half of the fatal poisonings in children under five.* The Aloin Strychnine and Belladonna pill and the Hinkle pill were largely to blame. The 1946 National Formulary has eliminated the strychnine from the Hinkle pill but has doubled the strychnine (from 1/120 to 1/60 grain) in the A.S. and B. pill. The ingestion of ten to fifteen of these by a small child might well prove fatal.

The physicians, called upon to advise the parents when a child has ingested one of the many household materials which may or may not be poisonous, is frequently in a quandry whether there is need for treatment or not. As suggested by Gold,* something should be done to insure that the label on the container contains the name and amount of chemical present in the preparation. A lot of unnecessary treatment might then be obviated. Here is an opportunity for some constructive legislation.

We mention the obvious conclusion that unused and poisonous drugs be discarded or at least be kept in a place inaccessible to children.

*Conference on Therapy, Household poisoning. Am. J. Med., 6:237, 1949.

ADVERTISING PROGRAM

AT A combined meeting of the Board of Trustees and the Campaign Co-ordinating Committee of the AMA held on May 28, 1950, it was decided to undertake a nationwide advertising program in October. Emphasis is to be made on the importance of voluntary health insurance—not of any special type but the kind that fits the individual case—in contradistinction to compulsory state-provided and tax-supported medical care. It was at first thought impractical to use the usual media of advertising, such as newspapers, magazines and radio but this is exactly what will be used this fall in a concentrated educational drive. The total advertising budget of $1,110,000 will be allocated, $560,000 to some 11,000 daily and weekly newspapers throughout the country, $300,000 to radio, and $250,000 to about thirty national magazines. The medical profession may have been slow in taking up the challenge to their very existence as a private enterprise but if the wave of socialism which has spread over the country is stemmed and private industry saved, the medical profession will deserve much credit.

The medical profession would welcome a showdown vote in Congress on the proposal to nationalize the profession in order to clear the atmosphere and settle the question whether the people of this country wish this change. Until such time as the issue is settled, our efforts which so far have been successful beyond expectation will have to be continued to assure the existence of medical care as a private enterprise.

The AMA requires the support of every physician in the country. Have you done your part financially by sending your check, made payable to the AMA for $25.00, to the Minnesota State Medical Association office at 496 Lowry Medical Arts Building, Saint Paul? Last year the percentage of our state members who paid the voluntary assessment of $25.00 for this same purpose was nothing to be proud of.

This advertising program is entirely educational in nature, though it will be called by other names by our opponents. Financial support to the extent of $25.00 is the least each member can do in defense of his practice. Just as important is the personal education he carries out on his patients and friends in his everyday contacts.

Since the above was written, our attention has been called to the address* of our national president, Dr. Ernest E. Irons, before the AMA House of Delegates at San Francisco on June 26, 1950. The address deals with the modern trend towards a nationalistic government and should be read by every member.

SHOE-FITTNG FLUOROSCOPES

WE ARE ADDING our voice to those raised elsewhere† in issuing a warning of the possible danger from the indiscriminate use of the fluoroscope for fitting shoes. All such apparatuses are not of equal strength, are not built with the x-ray tube at the same distance from the foot, and are not regulated for the same period of exposure.

It is perhaps not generally appreciated that repeated exposures from such innocent machines can affect the growth of bones in the feet of children, especially by their action on the epiphyses of the bones of the feet, to stunt their growth without showing evidence of affecting the skin—in other words, from less than an erythema dose. Repeated exposures may cause skin lesions at a later date without evidence of deleterious effect while the exposures are being received.

Most machines provide sufficient protection to the shoe clerk. The chief danger lies in the repeated exposure of the foot and particularly that of a child. They are not playthings for children or adults and should be kept under lock and key and be used only under the direction of an attendant who knows the possible dangers from overexposure to the x-rays.

Although no reports have appeared of untoward or severe injury having been caused by these shoe-fitting x-ray machines during the past two decades during which they have been used, warnings were issued some ten years ago by the New York Roentgen Society, in the *Monthly News Letter* of the American College of Radiology in February, 1948, and again in March, 1950, also in an editorial sponsored by the College in the *Journal of the American Medical Association* of April 9, 1949.

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*J.A.M.A. 143:977-979 (July 15) 1950.

†Hemplemann, L. H.: Potential dangers in the uncontrolled use of shoe-fitting fluoroscopes. New England J. Med., 241:335, (Sept. 1) 1949.

Williams, Charles R.: Radiation exposures from the use of shoe-fitting fluoroscopes. New England J. Med., 241:333, (Sept. 1) 1949.

As a result, regulations have been made regarding the use of these machines in certain cities. The New York City Health Department has specified that the maximum permissible dose per exposure shall not exceed two roentgens as far as the machine is concerned, and that not more than three exposures in one day or twelve in one year shall be allowed. An easily readable sign to this effect is required to be posted on the machine. The New York City Sanitary Code makes further specifications for the protection of the operators and attendants.

AMA MEETING

SOME 10,119 physicians registered at the anual meeting of the American Medical Association in San Francisco, June 26-30, 1950. Of this number, 5,517 were from California, 455 from Illinois, 311 from New York, and 154 from Minnesota. The attendance compares favorably with the second largest registration of 13,221 at Atlantic City last year and the largest registration in history, that at Atlantic City in 1947, the Centennial meeting of the Association, when 15,667 physicians registered.

Continuation of the National Education Campaign during 1951 with the firm of Whittaker and Baxter as directors was approved. In 1951, a subscription to *The AMA Journal* will be included in the dues of $25.00.

The following officers were elected by the House of Delegates:

John W. Cline, San Francisco, President-Elect

R. B. Robins, Camden, Arkansas, Vice President

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Doctors like fees no doubt—ought to like them; yet if they are brave and well-educated, the entire object of their lives is not fees. They, on the whole, desire to cure the sick; and if they are good doctors, and the choice were fairly put to them, would rather cure their patient and lose their fee than kill him and get it.—JOHN RUSKIN.

SUGGESTIONS FOR THE DIAGNOSTIC STUDY OF A PATIENT WITH AN ABNORMAL X-RAY SHADOW OF THE CHEST

The mass chest x-ray surveys have increased the number of patients consulting physicians about chest diseases. In these survey films, as well as in other chest films taken routinely, abnormal shadows may be found. The roentgenologist reports these shadows as he sees them and he then interprets the findings in the light of his past experience. It must be emphasized that the roentgenologist is not able to give either a bacteriological or histological diagnosis from the x-ray film. He can, however, give very accurate diagnosis in many of the films that he reads. The absolute diagnosis, however, still remains the responsibility of the clinician. The following suggestions are made to aid the physician in making a diagnosis of chest lesions. It is apparent that these suggestions are minimal in character and that the physician may and can add to them.

1. What constitutes the clinical history in a case of chest disease? The history should be detailed and in the patient's own words. In addition leading questions should bring out in particular—

(a) What diseases are endemic in the patient's locality?

(b) Has the patient been exposed to tuberculosis and if so, when, where, and to what extent? Has there been a family history of tuberculosis and was the patient exposed to the members of his family who suffered from the disease?

(c) The occupational history should emphasize the possible exposure to irritating dusts, vapors, et cetera.

(d) Was it possible for the patient to have been exposed to fungi or has the patient resided in or traveled through known endemic areas?

(e) What is the racial extraction of the patient? It is well known that certain races are more prone to tuberculosis than are other races.

(f) Has the patient ever had a chest x-ray before? If so, for what purpose, and can it be obtained for comparison purposes?

(g) Has the patient ever had a tuberculin test? What was the result?

(h) Has the patient ever had any previous chest diseases?

2. What constitutes the physical examination?

The physical examination should be made with the patient completely disrobed and in a well-illuminated room. It should include the examination of all organs and systems in the body and every orifice should be examined.

3. What is the minimum amount of laboratory work indicated?

It is suggested that the minimum amount of laboratory work should be—

(a) Hemoglobin

(b) White blood count

(c) Sedimentation rate

Report of the Committee on Tuberculosis, Minnesota State Medical Association.

(d) Urinalysis
(e) Wassermann test
(f) Agglutination test for undulant fever

Other laboratory procedures should be ordered when indicated.

4. What is the role of the tuberculin test (Mantoux test)?

This is the most valuable test known to determine existence of an infection by tuberculosis. The test for accuracy is dependent upon—

(a) Potent material
(b) Proper intradermal injection
(c) Proper interpretation of the test at the end of 48 to 72 hours.

The test should be read then by the degree of induration and not by the zone of erythema. For practical purposes it is not necessary to give the degree of reaction but rather to report the test as either positive or negative. Any induration exceeding 5x5 mm. is considered a positive reaction. *The tuberculin material in Minnesota is supplied free of charge by the Minnesota State Board of Health. The committee would like to emphasize that every patient consulting the physician for any purpose whatsoever, should have a routine Mantoux test.* Should the test prove positive, the patient should have a chest x-ray and this should be repeated once yearly if no active disease is found on the original film. Those people who have a negative Mantoux reaction should be retested not less than once yearly. The committee also suggests that the patch test not be used. When indicated, other skin tests may be applied. A positive Mantoux test does not mean clinical tuberculosis.

5. What is the role of the roentgenologist?

The roentgenologist has an important role in the screening of chest x-ray films. In making his report he should not be too positive in his diagnosis but rather describe the lesions seen and then suggest the possible diagnosis. When indicated, the roentgenologist should feel at liberty to suggest other specialized x-ray procedures to help in making the diagnosis. Wherever possible, both he and the clinician should determine whether other chest x-ray films have previously been made on the patient in question, and if so, an effort should be made to obtain the films for comparison. It must be emphasized that serial x-ray films of the chest are often more valuable than a single film. Follow-up x-ray films should be made on every patient who has a chest lesion and/or who has a positive Mantoux test. The maximum period between films should not exceed one year. X-ray films should always be required at the time of discharge of patients from the hospital after apparent recovery from acute chest diseases. *Most important, make use of the roentgenologist as your consultant.*

6. What is the minimal laboratory work indicated to determine the presence of the tubercle bacillus?

It is necessary to know that the material being submitted for examination actually has come from the lungs and that it is not simply saliva or nasal discharge. The committee suggests that three successive 24 hour sputum specimens be submitted for smears, culture and/or guinea pig inoculation. If the attending physician suspects that other organisms than the tubercle bacillus are causing the chest lesion, he should so inform the laboratory personnel. When the patient is not raising sputum, gastric washes should be done and the material submitted for both guinea pig and/or cultural investigation. The gastric washes may be obtained—

(a) As a result of an over-night stay in the local hospital
(b) In the local tuberculosis sanatorium after the proper arrangements have been made with the medical director
(c) In the physician's office
(d) In the patient's home with the help and assistance of the local public health nurse.

It is essential that exact technique be used in obtaining of the material. The information concerning the technique may be obtained either from the local sanatorium or from the State Health laboratories. Exudates, such as pleural fluid, et cetera should also be submitted for laboratory investigation. Do not overlook the possibility of finding malignant cells in sputum, exudates, et cetera.

7. What should be the follow-up care of the tuberculosis patient recently discharged from the sanatorium?

The committee suggests that the private physician consult the sanatorium director for detailed information concerning the patient's sanatorium course and what suggestions the medical director may give for the follow-up care of the patient. Here again, it is important to remember that the sanatorium medical director is your consultant; make use of him in the management of the sanatorium's discharged patient.

8. How shall the patients with indetermined chest lesions be classified?

If the patient has been thoroughly studied, the committee feels that the attending physician's classification should be accepted for the record. The diagnosis of tuberculosis remains a presumptive or suspected diagnosis until the tubercle bacillus has been demonstrated. If a positive diagnosis has been made, have you reported the case to the Health Department?

9. What other procedures may be used to diagnose chest lesions?

There are a great many highly specialized investigations that assist in making the diagnosis of a chest lesion. Some of these, such as bronchoscopy, bronchograms, kymography, and the like, can only be done in centers especially equipped for such studies. When these specialized studies are indicated, the attending physician should refer his patient to a physician or to an institution equipped to carry out such investigations.

10. What should be the follow-up procedure in the patient in whom chest lesions have been found?

The committee recommends that the private physician make every effort to see that such patients be reexamined periodically. It is the duty of the private physician to use every facility at his command to have his

patients return for chest and x-ray examinations. Whenever necessary, he should call upon the public health nurse in his locality or the public health officer to aid him in the periodic follow-up of the patient with a chest disease.

BCG VACCINATION

Considerable attention has recently been given to BCG vaccination in the public press. From this publicity the impression might be gained that this procedure alone holds promise of real control of tuberculosis. Since such an impression might postpone indefinitely the establishment and extension of accepted control measures, this statement of the status of vaccination in tuberculosis control programs is issued.

1. Control measures in tuberculosis should be directed at eradication of the disease as a major cause of death or disability.

2. The marked improvement in tuberculosis mortality figures, particularly for the ages under thirty, demonstrates the effectiveness of the present control program.

3. The low rate in children and the continuing high rates in adults over fifty emphasize the location of the problem at the older age levels rather than in children. Under these circumstances, the efficiency of a method of tuberculosis control would be measured by its effect on the mortality from tuberculosis in the older age group, rather than in children.

4. The addition of a vaccine to the present control program requires both careful and adequate consideration. Of the vaccines proposed, BCG has been used most widely and is the one most often discussed.

5. This has been used for more than twenty-five years and recently many millions of people have been vaccinated. However, it must be stated that there is no evidence that meets strict scientific requirements demonstrating that BCG effects the control of tuberculosis, despite the very suggestive results of a few studies.

6. Because of the above fact and because there is no general agreement among investigators anywhere in the world on such fundamental matters as the preparation of vaccine, the method of vaccination, what constitutes a successful vaccination, how resulting immunity may be measured, how long such immunity lasts, et cetera, the procedure would seem to be still in the investigational period.

7. It is therefore recommended that investigation of vaccination in tuberculosis be continued and increased under standard and stringently controlled conditions. This investigation should be designed to determine if the vaccine is indeed effective and what the limitations of its use may be. It would seem desirable that in each country, one agency, preferably the official health agency, should have control of the investigation.

8. Until this has been determined and until these controlled studies are completed, the use of BCG vaccine should be limited to such investigative studies.

9. At the present time the methods which have been proved effective in tuberculosis control should be increasingly applied to all segments of the population, regardless of decreasing mortality figures, so long as tuberculosis remains an important cause of death. These measures include mass x-ray case finding, early diagnosis, rapid institution of treatment, isolation of open cases, and the restoration of the patient to normal life.

Report of the Council on the Management and Treatment of Diseases of the Chest, American College of Chest Physicians.

WHO IS HARDEST HIT?

Doctors should be aware of the fact that the families under their care who earn under $5,000 a year pay most of the tax bills. Family physicians in many instances could bring this realization to those in that bracket whom they attend. Curiously, many people do not comprehend this simple truth. Why do these families pay most of the tax bills? Because there are so many of them. The Federal Reserve reports that 8,250,000 families receive more than $5,000 a year, that 29,250,000 families get less.

But these 29,250,000 families pay most of the taxes because they consume the most products. For products pay taxes! There is a hidden tax on every product that moves from mine or farm or forest or fishery, or from factory to wholesaler, from wholesaler to retailer, from retailer to consumer—and transportation taxes every time the product moves. By sheer force of numbers, the smaller income group pays most of these taxes.

The 38 per cent of net income that a corporation is taxed is paid by consumers who buy the corporation's products. Families with incomes of less than $5,000 buy 72 per cent of the nation's automobiles, wear most of the clothes sold, use most of the electricity, and eat most of the food. Every time they buy a new automobile, the $400 which taxes represent give them less automobile and more tax burden than they think. They smoke 70 per cent of all tobacco; about 50 per cent of what they pay for tobacco and gasoline is in taxes.

Families of under $5,000 income bought 64 per cent of the food in Denver, 69 per cent in Detroit, and 71 per cent in Houston, according to a Labor Department study of these typical cities. Of course, they must have paid about that proportion of corporation taxes levied on food companies in those cities. What is true of these products holds true for almost all family consumption. And since taxes can be paid only out of products, it is the total family spending of these 29,250,000 families that pays the bulk of our taxes.

* * *

Many young physicians and their families are in this income bracket as they start out. Do they realize what deficit spending is doing to them? Would it not be well to think about that? Especially in view of coming Congressional and Presidential elections.

* * *

No matter what party achieves power, the principle holds good that deficit spending and high taxation bear most heavily on those who can least afford these luxuries, until finally ruin brings despair to all alike. Editorial Comment—New York State Journal of Medicine, August 15, 1950.

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
Minnesota State Medical Association
George Earl, M.D., Chairman

GRADUATES WARNED OF DEFICIT SPENDING

The *Wall Street Journal* recently gave graduates a commencement address on the evils of deficit spending—a subject all Americans could study with grave concern. The *Journal* says:

"No one could blame these young people, then, if they were to regard Treasury deficits as a normal way of life. Some folks much older seem to regard red ink in the budget as nothing to worry about. A few even contend that through deficits lies the road to prosperity. And a handful have argued that a huge Government debt is no cause for concern—after all, 'we owe it to ourselves.'"

Showing the fallacy of these ideas, the *Journal* quoted the campaign speech of Franklin D. Roosevelt:

"If a nation is living within its income, its credit is good. If in some crisis it lives beyond its income for a year or two, it can usually borrow temporarily on reasonable terms. But if, like the spendthrift, it throws discretion to the winds, is willing to make no sacrifice at all in spending, extends its taxing up to the limit of the people's power to pay, and continues to pile up deficits, it is on the road to bankruptcy."

The editorial then described what the giver of such good advice did about it, revealing that in every year since Roosevelt's election, there was a mounting government deficit. The debt has not stopped climbing during this present administration—in fact, it is bigger than ever. The *Journal* has this to say:

"There is in the Administration at Washington no real will to save—to trim unnecessary expenditures, to forego housing subsidies and farmer subsidies and bigger welfare programs. Yet the fiscal figures show the Government can't afford them.

"There is no will to fiscal sanity at Washington because the Administration still follows the political advice of the late Harry Hopkins to tax and spend and elect. Whenever there is criticism of deficits then there is an excuse: why, we're fighting a cold war and we can't balance the budget because we must build our defenses and help Europe in the battle against Communism.

"It's a good alibi but it's not the reason. A recent Senate committee study showed that a large part of the rise in expenditures the past couple of years has been due to strictly domestic projects. Farm price supporting and home mortgage financing are examples."

Another President Quoted

Giving sound advice, the *Journal* remarks that those college graduates will do well to recall the history they've been studying. They'll remember that no nation has ever succeeded in spending its way into permanent prosperity. "The deficit roads of past centuries are studded with collapsing nations." Concluding, the *Journal* reminds the graduates that it might be a good idea to throw this quotation of George Washington's at any candidate who thinks deficits are good:

"As a very important source of strength and security, cherish public credit. One method of preserving it is to use it as sparingly as possible, avoiding occasions of expense by cultivating peace, but remembering, also, that timely disbursements, to prepare for danger, frequently prevent much greater disbursements to repel it; avoiding likewise the accumulation of debt, not only by shunning occasions of expense, but by vigorous exertions, in time of peace, to discharge the debts which unavoidable wars may have occasioned, not ungenerously throwing upon posterity the burden which we ourselves ought to bear."

Graduates might also note the words of Dwight D. Eisenhower:

"Since government takes about one-fourth of every worker's income, and still can't make ends meet, he should have sense enough to insist that the government do what he himself has to do in the same circumstances —cut its spending by a like amount, at least."

POSTERITY STILL BEARS BURDEN

That same burden which concerned President Washington apparently has not been bothering those who control present-day government spending. Placing the burden squarely on the shoul-

ders of taxpayers, the government still spends lavishly, the federal debt now amounting to about 278 billion dollars.

But, due to hundreds of hidden taxes paid daily, the average taxpayer has a difficult time knowing how much he actually pays the government in taxes. A recent pamphlet from the Minnesota Taxpayers Association has brought to light the enormous amount of hidden taxes paid on ordinary items:

"But what about the hidden taxes—the taxes that build up all the way along from raw material to the finished goods on the shelves of retail stores?

"There are 206 taxes levied during the manufacture and sale of that new Chevrolet and covered in the price you pay your dealer. Or, if you buy a new suit of clothes, you're paying 116 taxes. A new hat for your wife, 150 taxes. A loaf of bread, 151 taxes. And a dozen eggs, 100 taxes.

"You'll probably be surprised to learn that these hidden taxes are costing you and your family some $700 this year—at least, that's the national average. Nine out of 10 families pay more in hidden taxes than they do in income tax."

Illustrating other hidden taxes, the pamphlet states that the smoker pays 11 cents taxes on every package of cigarets bought. Of this amount, 7 cents is federal, 4 cents is in state taxes. "If you smoke a pack a day, you're paying $40 a year tax. With more than half the selling price going for taxes, cigarets are among the most ruthless tax collectors the government has."

The Taxpayers Association has also discovered that Americans pay more annually to be governed than they pay for food. Combined cost of all government functions last year was 56 billion dollars. The national food bill came to 53 billion dollars—convincing enough figures to cause Americans to take an active interest in the amounts being spent by the people elected to represent them in Washington.

AMA PRESIDENT HITS STATE SOCIALISM ISSUE

Making his initial speech as president of the American Medical Association, Dr. Elmer L. Henderson called American medicine only the first socialization goal of "a comparatively small group of little men—little men whose lust for power is far out of proportion to their intellectual capacity, their spiritual understanding, their economic realism or their political honesty."

Government Medicine—A Step to Socialism

Dr. Henderson cited these little men for attempting to bring all fields of human endeavor under government control:

"These men of little faith in the American people propose to place all our people—doctors and patients alike—under a shabby, Government-dictated system which they call 'Compulsory Health Insurance.' And this, factually, is Socialized Medicine, regardless of how hard they try to disclaim it.

"But it is not just 'socialized medicine' which they seek; that is only their first goal.

"Their real objective is to gain control over all fields of human endeavor. Their real objective is to strip the American people of self-determination and self-government and make this a Socialist State in the pathetic pattern of the socially and economically-bankrupt Nations of Europe which we, the American people, are seeking to rescue from poverty and oppression."

Dr. Henderson warned doctors throughout the nation that socialism differs from communism only in one particular. He said:

"This we must all recognize:

"There is only one essential difference between Socialism and Communism. Under State Socialism human liberty and human dignity die a little more slowly, but they die just as surely!"

INDUSTRY LEADERS SANCTION "RIGHTS OF FREE MEN"

Helping to sustain these human liberties and human dignities, some of the nation's leading industrial men, meeting recently in Boston, endorsed the following "rights of free men" so that the individual American "may face the future with confidence":

"1. The right to personal initiative; to choose freely; to lead but not to dictate; to follow but not to be driven.

"2. The right to opportunity; to have a chance to forge ahead by his own efforts; to succeed or fail; and if he fails to try again.

"3. The right to personal dignity; to be protected from those impositions of others which they would not impose on themselves.

"4. The right to participate in affairs of common concern; to hear and be heard; to stand alone or to be one among equals.

"5. The right to provide for the future; to save or to spend; to advance or hold still; to be judge of his own welfare."

(Continued on Page 853)

THE INTERURBAN ACADEMY OF MEDICINE

INVITES YOU TO ATTEND A

CANCER TEACHING CLINIC

Duluth, Minnesota **October 18, 1950**

Clinic Sponsored by the

Minnesota State Medical Association
Minnesota Division, American Cancer Society
Minnesota Department of Health
Wisconsin State Medical Society
Wisconsin Division, American Cancer Society
Wisconsin State Board of Health

No Registration Fee—Program furnished through funds of the American Cancer Society and its Minnesota and Wisconsin Divisions.

Afternoon Session—Saint Mary's Hospital, Duluth

P.M.
2:00 Motion picture—"Breast Cancer—The Problem of Early Diagnosis."
2:30 "Cytological Diagnosis of Malignancies"
JOHN R. McDONALD, M.D., Associate Professor of Pathology, University of Minnesota Graduate School, Minneapolis-Rochester, Minnesota.
3:10 Recess
3:20 "Office Diagnosis of Malignancies"
CARL W. EBERBACH, M.D., Associate Clinical Professor of Surgery, Marquette University School of Medicine, Milwaukee.
4:00 "The Problem of Carcinoma of the Lung"
RICHARD L. VARCO, M.D., Associate Professor of Surgery, University of Minnesota Medical School, Minneapolis.
4:40 General symposium and question and answer period.

Evening Session—Gitchie Gammi Club, Duluth

P.M.
5:30 Social hour
6:30 Dinner
"Radical Surgery in Advanced Cancer of the Female Genital Tract"
ALEXANDER BRUNSCHWIG, M.D., Professor of Clinical Surgery, Cornell University Medical College, New York.

DETACH AND MAIL IN ENVELOPE

RESERVATION BLANK
Detach and Mail Today
to
Minnesota State Medical
Association
496 Lowry Medical Arts Bldg.
St. Paul 2, Minnesota

Arthur H. Wells, M.D., Chairman, Committee on Cancer
496 Lowry Medical Arts Building
St. Paul 2, Minnesota
Dear Dr. Wells:
Please enter my reservation for the CANCER CLINIC to be held in DULUTH on Wednesday, October 18.
I will attend: The AFTERNOON SESSION only ☐
The DINNER MEETING only ☐
All sessions ☐

(Check Functions You Will Attend, Please)

SIGNED _____
(Please print)

ADDRESS _____

_____

Minnesota Academy of Medicine

Meeting of March 8, 1950

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, March 8, 1950. Dinner was served at 7 o'clock, and the meeting was called to order at 8:10 p.m. by the President, Dr. William A. Hanson.

There were forty members and two visitors present.

Dr. Hanson announced the election of new members for the April meeting. Dr. Lepak announced that recommended changes in the Constitution and By-Laws of the Academy would go out with the program of the April meeting, to be voted on at a later date.

Dr. J. K. Anderson introduced Dr. Vernon Waite, of Honolulu, who gave a short talk. Dr. Burch then presented Dr. Donald Hastings of the University of Minnesota Medical School.

Dr. Ritchie requested that proposals for new members be sent in very soon so that they could be considered by the Executive Committee before the April meeting.

The scientific program followed.

Dr. Harold Diehl, of the University of Minnesota, gave a report on his recent trip to Britain, entitled "Medical Education in Britain," after which he answered several questions by the members present.

The meeting was adjourned.

WALLACE P. RITCHIE, M.D., *Secretary*

Meeting of April 12, 1950

The regular monthly meeting of the Minnesota Academy of Medicine was held at the Town and Country Club on Wednesday evening, April 12, 1950. Dinner was served at 7 o'clock, and the meeting was called to order at 8 p.m. by the President, Dr. William A. Hanson.

There were sixty members and four guests present.

The President announced that Dr. Donald MacKinnon had been elected to active membership in the Academy and the secretary was instructed to notify Dr. MacKinnon of his election.

The President appointed a Memorial Committee to draw up a Memorial to Dr. James K. Anderson, to be presented at the May meeting.

Upon ballot, the following were elected as candidates for membership in the Academy:

Minneapolis.....Dr. E. T. Evans
Minneapolis.....Dr. Thomas Lowry
St. Paul.....Dr. Harold Flanagan
University.....Dr. Donald Hastings

The scientific program followed.

CURRENT MORTALITY OF TRANSURETHRAL RESECTIONS

DONALD CREEVY, M.D.

Dr. Creevy, of the University of Minnesota, gave a paper on the above subject. Lantern slides were shown.

Abstract

Free hemoglobin, formed in the bladder when blood and water mix during transurethral resection, may be driven into the open prostatic veins and lead to a hemoglobinuria (lower nephron) nephrosis which may be fatal. This is particularly likely to occur if the kidneys have been damaged previously, or if renal vasospasm is produced during operation by excessive loss of blood, by prolonged hypotension, or by bacteremia, which has been shown to occur in 45 per cent of transurethral resections.

Hemoglobinuric nephrosis during transurethral resection can be prevented by using an isotonic, nonhemolytic irrigating fluid such as 4 per cent glucose, 1.1 per cent glycine, or 3 per cent mannitol.

In transurethral resection in one thousand consecutive cases done with the aid of isotonic solutions, Creevy, Webb and Smith have had a hospital mortality of 0.6 of 1 per cent.

Despite statements in the literature to the effect that, with modern use of antibiotics, transfusions, and anesthesia, the mortality of open enucleation of the prostate is now no greater than that of transurethral resection, the author found, in some 2400 retropubic, perineal, and suprapubic enucleations reported in the literature between 1945 and 1950 the average mortality was 5.3 per cent, or nearly nine times that of the author's series of 1000 cases, while the mortality of 3500 cases reported up to 1938 of open enucleation was 6.6 per cent. In contrast to this, Thompson has reported over 11,000 transurethral resections with a mortality of 1.5 per cent.

It seems reasonable to conclude that a well-done transurethral resection is a good deal safer than a well-done enucleation.

Discussion

DR. FREDERIC E. B. FOLEY (St. Paul): There is one most important thing for me to say about this excellent

paper. I have known Dr. Creevy for a long time, he is honest, he tells the truth and if he tells you he has had an operative mortality of 0.61 per cent in 1000 cases of transurethral resection, you can depend on it that is just what he had.

Dr. Creevy's accomplishment and low mortality in these 1000 cases are remarkable.

The whole business of transurethral prostatic resection is remarkable. The enterprise began 20 years ago. At first there was wild enthusiasm. Then there was disillusionment. Now finally, among the enlightened, it is recognized as the operation of choice in a large proportion of cases. What that proportion will be in different hands does not depend on the "cases" so much as it depends upon the "doctor," and his honest appraisal of his own talent and ability as a resectionist.

More should be said—than Dr. Creevy said—about the effects of modern developments on the choice of operation for vesical neck obstruction. Mortality has dictated the choice, while morbidity and other undesirable accompaniments of extensive resections have been overlooked. Sulfa drugs, antibiotics, multiple transfusions and other improvements of modern surgery have made of suprapubic prostatectomy, perineal prostatectomy—and now retropubic prostatectomy—entirely different matters from what they were formerly. Through benefit of these improvements these operations nowadays—if properly applied and well performed—are just as safe as transurethral resection, will give a mortality no greater than Dr. Creevy reports for transurethral resection and will be accompanied by a hospital stay no longer than with transurethral resection. Besides that they are devoid of the morbidity, blood loss and other undesirable effects that go with "transurethral prostatectomy" in cases of very large prostates.

Transurethral resection in the hands of the casual resectionist will not give any such mortality as Dr. Creevy has had. The unfavorable morbidity and other bad effects will be even worse than the mortality. Transurethral resection is a highly specialized procedure and belongs only in the hands of the specialist. I confidently and sincerely believe that in other hands all patients with vesical neck obstruction will be better off with enucleation than with transurethral resection, even in the cases of small prostate not requiring large tissue removals.

If Dr. Creevy feels that his patients and he are better off taking out 80 to 100 grams by transurethral resection than they would be with enculeation it must be a good conclusion for him and has my approval.

A lot of people don't have that same conclusion about themselves. I for one do not. I can make a decent transurethral resection with removal of up to 50 grams of tissue and feel I have taken advantage of all the merit of the operation. When I go beyond that extent of tissue removal, all merit of the operation rapidly diminishes and with the very large prostates is completely lost.

The choice of operation is an individual matter for the surgeon and is conditioned by his skill and ability in the use of the different operations and the results he has had with them.

There is indeed such a thing as the status of a surgeon in the use of any operation. There is no such thing as the "present status" of any operation in the hands of thousands of different surgeons.

For me it works out this way: if it is a big gland—too big for a good resection in my hands—and he is a husky, good risk patient, I make a suprapubic prostatectomy. That operation is foolproof, always gives a good result and has no morbidity. If the big prostate is in a dilapidated old crock not fit for any operation I make a perineal prostatectomy. There may be some incontinence with perineal prostatectomy, in my hands, and other difficulties which affect more my vanity as an operator than the results obtained. But I know it is almost impossible to kill a patient by the operation. In cases of very large prostates in old poor risk patients I am glad to accept these disadvantages of the perineal operation rather than the greater morbidity of an extensive transurethral resection or the greater mortality of suprapubic prostatectomy.

With suprapubic prostatectomy as we do it now, the patient is out of bed, voiding normally and with a completely healed wound on the fourth to eighth day and usually is ready to leave the hospital by the tenth day.

At the meeting of the Southern Minnesota Medical Association recently we presented the results in the last previous 100 consecutive operations for vesical neck obstruction. There was one death. The difference between that and Dr. Creevy's mortality is .39 per cent, which is insignificant.

All in all, I think the functional result and morbidity is better with suprapubic prostatectomy than it is with transurethral resection.

Dr Philip F. Donohue (St. Paul): I wish to congratulate Dr. Creevy on his fine report. The remarkably low mortality in his large series is a tribute to the care in the selection and preparation of patients for operation and to the skill of the resectionists. Certainly such a record could scarcely be equaled by the occasional and unskilled operator. This highly specialized procedure carries with it the possibility of technical mishaps which will probably occur more frequently in inexperienced hands. But, even under the best of care and performance, some deaths will occur. The great difficulty is in the proper appraisal of operability. This is particularly true of cases in the cardiovascular group where it may be impossible to foresee the sudden collapse that occasionally occurs in the immediate postoperative period. But the risk must be taken when there is a real need for surgical relief.

Dr. Creevy (in closing): I want to thank the discussants for their kind remarks. Obviously, one could go on at great length about the details of prostatic surgery and about the advantages and disadvantages of the various operations when they are compared to one another. All I can say about transurethral resection is that one has to have an earnest desire to do a good job and to keep eternally at it just as the good golfer does. When the transurethral operation is well done, it is perfectly safe to say that it is safer, from the patient's point of view, than any of the open operations.

TREATMENT OF FRACTURES WITH THE INTRAMEDULLARY NAIL

WALLACE COLE, M.D.

Dr. Cole, of St. Paul, gave a paper on the above subject.

Discussion

Dr. Vernon L. Hart (Minneapolis): Dr. Cole has considered almost every phase of this fascinating subject of the intramedullary nail. I first became acquainted with this method of internal fixation when I was in the Army at Fitzsimons General Hospital in Denver, during 1944. I saw my first cases of the Kuntchner intramedullary nail in German prisoners of war who were brought to this country. They clean wounds, no serious complications, and free joint motions. We were impressed at that time because there at Fitzsimons General Hospital I was in charge of 187 patients who

(Continued on Page 853)

MINNESOTA STATE MEDICAL ASSOCIATION
House of Delegates—Summary of Proceedings

Duluth Session—June 11-12, 1950

First Meeting, Sunday, June 11, 1950

The Ballroom, Hotel Duluth
Duluth, Minnesota

The Ninety-seventh Annual Session of the House of Delegates of the Minnesota State Medical Association was held in the Ballroom, Hotel Duluth, Duluth, Minnesota, beginning at 2 p.m., Dr. C. G. Sheppard, Hutchinson, Speaker, presiding.

Dr. Sheppard called the meeting to order. After approval of the minutes of the 1949 session, Dr. Sheppard introduced Dr. W. A. Wright, president of the North Dakota State Medical Association, who brought greetings from his state.

Dr. Sheppard then called for the report of Dr. O. J. Campbell, chairman of the Council.

Report of the Council

DR. CAMPBELL: The first meeting of the Council of the Minnesota State Medical Association was held on June 10, 1950, at 2 p.m. in the English Room of the Hotel Duluth, Duluth, Minnesota, for the transaction of routine business. The minutes of the previous meeting held on March 5, 1950 were approved . . . Your chairman will give a fairly detailed report of the Finance Committee later in the absence of Dr. Kennedy.

. . . the Council approved a resolution authorizing Dr. R. L. J. Kennedy, chairman, and the Finance Committee to dispose of the Nicollet Avenue Properties Corporation Bonds, if, after due consideration and proper advice, it was found to be advisable.

. . . the following applications for Temporary Affiliate Membership were approved: Arne D. Rydland, Crookston and William G. Atmore, Duluth.

. . . the following applications for Affiliate Membership were approved: Brand A. Leopard, Albert Lea; Ruth G. Nystrom, Malibu Beach, California, formerly of Minneapolis; Walter M. Boothby, Rochester; Arthur H. Sanford, Rochester; Frederick L. Smith, Rochester; John L. Crenshaw, Rochester; Della G. Drips, Rochester; Irving George Wiltrout, Oslo; John S. Grogan, Wadena; and Rufus O. Johnston, Hibbing.

Applications for Life Memberships were approved: Frank W. Calhoun, Albert Lea; J. Albert Schultz, Albert Lea; Arthur E. Benjamin, Minneapolis; Herbert B. Aitkens, Le Center; Herbert Z. Giffen, Rochester; Claude L. Haney, Duluth; Robert P. Pearsall, Virginia; and Moses L. Strathern, Gilbert.

Honorary Membership was granted to Myron M. Weaver, Vancouver, B. C., who is now Dean of the Medical School at the University of Vancouver, B. C.

The Council recommended that H. W. Leibold, Public Relations Director of the Minnesota Association of Chiropodists, be advised that, in any program involving general physical examinations of Ramsey County school children in which it is considered advisable to include the feet, the Minnesota State Medical Association would welcome the co-operation of the Association of Chiropodists, provided that such a program were under the supervision or direction of the orthopedic surgeons and that the entire survey had the approval of the Ramsey County Medical Society.

The Council voted to accept the reports of the Insurance Liaison Committee and the Committee on Medical Service.

The Council voted to recommend to the House of Delegates that Chapter One, Section Three of the By-Laws be revised to include the following stipulation in the second paragraph:

> "An active member who is delinquent in the payment of such dues for one year shall forfeit his active membership in the Minnesota State Medical Association if he fails to pay the delinquent dues within thirty days after notice of his delinquency has been mailed (by registered mail, return receipt requested) by the secretary of his component medical society."

The Council voted to request that the House of Delegates appoint a committee to study the advisability of establishing a special Minnesota State Medical Association membership classification for interns, to be known as an Intern or Junior Membership.

The Council voted to recommend the establishment of a permanent committee on Hospitals and Professional relations and a committee on Chronic Illness and Geriatrics.

The Council voted to contribute $100 to the National Society for Medical Research.

The Council recommended that members of the press be admitted to general sessions of the House of Delegates, reserving the right to call an Excutive Session.

The Council voted to recommend to the House of Delegates that it take cognizance of the honor bestowed on the medical profession by the selection of Dr. C. G. Sheppard, Hutchinson as the physician chosen by the *Ladies' Home Journal* for its "How America Lives" series. Also, it should be noted that Dr. Sheppard required some persuasion before he agreed to so represent the profession, and the Council wishes to express its appreciation to him and to his family for this co-operation.

Two resolutions were approved by the Council for recommendation to the House of Delegates:

1. A resolution reaffirming the association's well-considered and unhesitating opposition to socialistic infiltrations in any field of American thought and endeavor.

2. A resolution sanctioning and supporting the elimination of waste, duplication and inefficiency in the federal medical services of our country.

The Council voted to recommend to the House of Delegates that a resolution be drawn, instructing Minnesota delegates to the American Medical Association convention to support the Ohio State Medical Association's resolution for the establishment of a single membership classification in the American Medical Association.

Dr. Campbell then read the report of the Finance Committee which was approved by the Council. The report called attention to the fact that during 1949, there was an increase in net worth of the association of $4,126.45.

The House of Delegates approved the report of the Council, including the Financial Committee report, and Speaker Sheppard called for the report of the Reference

In accordance with action by the Council of the Minnesota State Medical Association in 1944, publication of the proceedings of the House of Delegates is limited to summary.

Committees. Dr. Sheppard called first upon Dr. L. E. Steiner, Albert Lea, Chairman of the Reference Committee on Medical Education Reports.

Medical Education Reports

DR. STEINER: The Reference Committee for Medical Education Reports met in the Norse Room on June 11, 1950. The following Medical Education reports were considered:

Committee on Cancer—A. H. Wells, M.D., Duluth, Chairman.
Committee on Conservation of Hearing—L. R. Boies, M.D., Minneapolis, Chairman.
Committee on First Aid and Red Cross—John S. Lundy, M.D., Rochester, Chairman.
Heart Committee—F. J. Hirschboeck, M.D., Duluth, Chairman.
Committee on Hospitals and Medical Education—H. S. Diehl, M.D., Minneapolis, Chairman.
Committee on Public Health Nursing—Mario Fischer, M.D., Duluth, Chairman.
Committee on Syphilis and Social Diseases—Paul A. O'Leary, M.D., Rochester, Chairman.
Committee on Tuberculosis—J. A. Myers, M.D., Minneapolis, Chairman.
Committee on Vaccination and Immunization—Robert N. Barr, M.D., St. Paul, Chairman.

The Committee accepted these reports, together with the committee recommendations and comments: changing the term "free blood," as used in the report of the Committee on First Aid and Red Cross, to something more suitable; further inquiry into the adequacy of the reasons given by the Committee on Hospitals and Medical Education for the lengthening of the medical school year to ten months; approval of the statement that there should be some definite proposals given to doctors on immunization procedures to be followed to serve as a guide for instructors, nurses, etc.; discussion of the problem of caring for old syphilitic cases with the usual therapy of penicillin, and it was recommended that the House of Delegates adopt a proposal to have all practitioners check their positive blood patients with further examination by spinal fluid test to bring about a more efficient and complete record of these syphilitic patients.

The House of Delegates accepted the Report of the Reference Committee on Medical Education Reports as a whole with the Committee's recommendations.

Dr. Sheppard then called for the report of the Reference Committee on Miscellaneous Scientific Reports, Dr. R. F. Hedin, Red Wing, Chairman.

Miscellaneous Scientific Reports

DR. HEDIN: The Reference Committee for Miscellaneous Scientific Reports met in the Ballroom on June 11, 1950 and considered the following reports:

Committee on Anesthesiology—R. C. Adams, M.D., Rochester, Chairman.
Committee on Child Health—G. B. Logan, M.D., Rochester, Chairman.
Committee on Diabetes—J. R. Meade, M.D., St. Paul, Chairman.
Committee on Fractures—E. T. Evans, M.D., Minneapolis, Chairman.
Committee on General Practice—R. H. Creighton, M.D., Minneapolis, Chairman.
Historical Committee—Robert Rosenthal, M.D., St. Paul, Chairman.
Committee on Industrial Health—L. S. Arling, M.D., Minneapolis, Chairman.
Committee on Maternal Health—J. J. Swendson, M.D., St. Paul, Chairman.
Committee on Medical Testimony—E. M. Hammes, M.D., St. Paul, Chairman.
Committee on Military Affairs—J. H. Tillisch, M.D., Rochester, Chairman.
Committee on Nervous and Mental Diseases—W. P. Gardner, M.D., St. Paul, Chairman.
Committee on Ophthalmology—T. R. Fritsche, M.D., New Ulm, Chairman.
Committee on Public Health Education—A. E. Cardle, M.D., Minneapolis, Chairman.
Committee on Radio—R. M. Burns, M.D., St. Paul, Chairman.
Speakers' Bureau — Haddon M. Carryer, M.D., Rochester, Chairman.
Editorial Committee—C. B. Drake, M.D., St. Paul, Chairman.

The Committee approved the above reports, and recommends the following be added to the report of the Committee on Ophthalmology:

1. That it be considered unethical for any member of our association to accept fees or other remunerations in the form of rebates, refunds, or gratuities.
2. That publicity be given this policy, so that the public will be informed as to the policy of this association.
3. That any savings that may be incurred from the adoption of this new policy will be in favor of the patient.
4. That it be suggested that if any county medical society find a member violating this recommendation, he shall be subject to disciplinary action for infraction of the above.
5. That the Committee on Ophthalmology meet with various optical companies to standardize a policy regarding the dispensing of glasses.

The Committee recommends that efforts be continued along the lines of the Public Health Education Committee; that continued use of Speakers' Bureau, radio, advertising and literature distribution be encouraged.

The question of cost, particularly the advertising campaign, is a matter for definite consideration. The Committee finds that there has been inequitable distribution of cost, and recommends that this be rectified. The Committee suggests that the Council consider this matter in the year ahead.

The Committee recommends that the University of Minnesota attempt to gear post-graduate education to that of general practice; that, in an issue of MINNESOTA MEDICINE, the Committee on Maternal Health publish a routine satisfactory office procedure for RH testing; that the Committee on Medical Testimony continue to see to it that all medical testimony given in the courts continue on its present high plane.

The House of Delegates accepted the report with the exception of the reports of the Committees on General Practice, Maternal Health, Medical Testimony, Ophthalmology and Public Health Education, which were then discussed separately.

A manual on the establishment and operation of the Department of General Practice in hospitals was added to the report of the Committee on General Practice and accepted by the House.

The House accepted the recommendations of the committee regarding the report of the Committees on Ophthalmology, Maternal Health, Medical Testimony and Public Health Education.

Dr. Sheppard then called for Medical Economics Reports, Dr. H. E. Wilmot, Litchfield, Chairman.

Medical Economics Report

DR. WILMOT: The Reference Committee for the Medical Economics Reports met in the Hotel Duluth, June 11, 1950. The committee considered the following reports:

Editing and Publishing Committee—E. M. Hammes, M.D., St. Paul, Chairman.
Committee on Interprofessional Relations—W. P. Gardner, M.D., St. Paul, Chairman.
Medical Advisory Committee—W. H. Hengstler, M.D., St. Paul, Chairman.
Committee on Medical Economics—George Earl, M.D., St. Paul, Chairman.
Committee on Medical Ethics—R. D. Mussey, M.D., Rochester, Chairman.
Committee on Public Policy—R. F. Erickson, M.D., Minneapolis, Chairman.
Committee on University Relations—E. M. Hammes, M.D., St. Paul, Chairman.

The committee accepted all the reports, with the following recommendations:

That an independent State Board of licensing practical nurses be recommended to the state legislature;

That, when issuing membership cards, the State association make some mention that the section which is to be sent to the Medical Advisory Committee in case of a malpractice suit does not mean that assistance is automatically forthcoming from the Medical Advisory Committee;

That the ads in the educational series be set off more distinctly in the newspapers.

The House accepted the report as a whole, referring the question of a state board on licensing practical nurses back to committee for consideration. Dr. Sheppard then called for the report of the Reference Committee on Miscellaneous Medical Economic Reports, Dr. L. E. Sjostrom, St. Peter, Chairman.

Miscellaneous Medical Economic Reports

DR. SJOSTROM: The Reference Committee for Miscellaneous Medical Economic Reports met in the Arrowhead Room on June 11, 1950 and considered the following reports:

Insurance Liaison Committee—A. W. Adson, M.D., Rochester, Chairman.
Committee on Medical Service—A. W. Adson, M.D., Rochester, Chairman.
Committee on Rural Medical Service—Paul C. Leck, M.D., Austin, Chairman.
Committee on State Health Relations—C. E. Proshek, M.D., Minneapolis, Chairman.
Committee on Veterans Medical Service—R. H. Creighton, M.D., Minneapolis, Chairman.
The Committee accepted all reports.

The report was accepted by the House and the Speaker called for the report of the Officers and Councilors, Dr. C. E. Rea, St. Paul, Chairman.

Officers' and Councilors' Reports

DR. REA: The Reference Committee for Officers and Councilors met on June 11, 1950, and the committee discussed the following reports:

Secretary's and Executive Secretary's Report, Councilor Reports from Districts One through Nine.

The committee wishes to commend the Medical Press Conference. The committee makes the following recommendation: That the designation of practical nurses be changed and the name "nurses' aide" be submitted for the term "practical nurse."

The House of Delegates accepted the report as a whole and referred its recommendation concerning practical nurses to the committee on Interprofessional Relations. The meeting adjourned at 5:30 p.m.

Second Meeting, Sunday, June 11, 1950

The Ballroom, Hotel Duluth
Duluth, Minnesota

The meeting of the House of Delegates of the Minnesota State Medical Association reconvened in the Ballroom of Hotel Duluth, Duluth, Minnesota at 8 p.m., Dr. Charles G. Sheppard, presiding.

The first order of business was a unanimous acceptance by the House of a 1949 recommendation of the Finance Committee that the $10 assessment, then in force, be continued for 1950, and, thereafter, dues be raised to $30 and the Constitution be thus amended.

The next item was a report from John Poor, substituting for Jarle Leirfallom, on the activities of the Division of Social Welfare. Mr. Poor reported that the number of people receiving old age assistance increased from 9,621 in 1946 to 14,256 in 1949. The total cost in 1949 was $4,973,000. Mr. Poor also explained the controversial Medical Estimate Form, the prior authorization form used by practitioners in estimating the amount of medical care needed by persons receiving old age assistance. The problem of the shortage of beds in rest homes and the shifting of the burden of caring for older folks, from their children to the county and state, were discussed by Mr. Poor, who recommended that doctors should not allow themselves to be talked into recommending rest home care unless the patient actually needs medical treatment. Mr. Poor stated:

". . . we are certain that in order to bring about a satisfactory medical program in public assistance, we, in public welfare, will require more and more cooperation from the medical profession. We can only achieve a successful program through the active participation of advisory committees made up of medical practitioners. We hope that our County Welfare organizations can come to the medical practitioners and ask for advice and help and they can get your cooperation in running their program locally. In an effort to control rising medical cost, we require follow-up checkups of recipients by the doctors attending these people. If the doctor indicates that the recipient no longer needs medical care, our County Welfare Board staff will be required to move these patients to other facilities as soon as possible.

"For the staff of the Division of Social Welfare, I would like to convey our most sincere thanks to the medical profession of Minnesota for their interest and co-operation in helping us meet the problems of furnishing medical care to the aged of this state."

Supplementary remarks were made by Dr. F. F. Callahan, St. Paul, and Dr. A. W. Adson, Rochester.

Dr. Sheppard next called for a report on Minnesota Medical Service, which was given by Dr. McKinley. Dr. McKinley reported that Blue Shield, as of April, 1950, has an enrollment of 322,288. He said that "the success of the plan could not have been possible with-

out the wholehearted support of the physicians of the state on the individual level, as well as on the organization level . . ."

Following this, the Speaker asked for a report of the Minnesota State Board of Medical Examiners by Dr. Julian Dubois. Dr. Dubois was not present, and the report was read by Dr. Magney, Duluth. Dr. Magney reported that during 1949 the Board licensed 320 doctors; the largest number ever to be licensed in a single year being 420 in 1947. The problem of licensing Displaced Persons to practice medicine in Minnesota has proved to be one which takes time and careful consideration. The Board of Medical Examiners, said Dr. Magney, wishes to continue to enlist the aid of members of the medical profession in this difficult job of processing applicants for the privilege of practicing medicine in this state.

Dr. Sheppard then called for the report of the Minnesota Department of Health, given by Dr. A. J. Chesley.

Dr. Chesley reported that during 1949, Minnesota had 73,000 live births. He said that the incidence of tuberculosis is decreasing and that deaths from the disease are also much lower. Dr. Chesley also stated that the nursing service is going on well.

Speaker Sheppard asked for the report of the Board of Basic Science, presented by Dr. Tregilgas who explained the work of the Board in reviewing applications for certificates.

Speaker Sheppard adjourned the House at 11 p.m. until June 12 at 12:15 p.m. for a luncheon, to be followed by the regular meeting at 1:30.

Third Meeting, Monday, June 12, 1950

The Ballroom, Hotel Duluth
Duluth, Minnesota

The House of Delegates reconvened at 1:30 p.m., Monday, June 12, 1950.

The first order of business was the final report of the Council by Dr. Campbell.

The Council voted to withhold approval of the Kellogg Plan, now proposed for Minnesota hospitals, until such time as the objectionable features were eliminated. The Council voted to refer to the Committee on First Aid and Red Cross a proposal to set up a separate committee on blood and its uses and the preparation of a brochure on blood use to be distributed to association members.

The Council considered a "Guide for Industrial Health Practice in Minnesota." Action on the Guide was tabled until the meeting on Tuesday, June 13, with the Minnesota Department of Health. Also, the Council referred to the Committee on Industrial Health the matter of investigating ways and means of effecting a waiver to that portion of the Workman's Compensation Law involving liability incurred in connection with employment of rehabilitated persons, thereby assisting the Department of Rehabilitation in the re-employment of such persons.

The Council accepted the recommendation of the Committee on State Health Relations that the county medical societies be urged to ask members of their societies to run for the office of coroner, as an act of public service, as this position was often found to be held by unqualified persons.

Also included in the final report of the Council were these recommendations: Dr. J. Arnold Bargen of Rochester re-elected as a Delegate to the American Medical Association; Dr. R. H. Creighton, to succeed Dr. J. C. Hultkrans as an Alternate Delegate to the American Medical Association, taking office in January, 1951; Dr. F. J. Elias to succeed Dr. W. A. Coventry as a Delegate to the American Medical Association; Dr. W. L. Burnap re-elected as an Alternate Delegate to the American Medical Association.

The Council voted to endorse and support the program of the Minnesota State Nutrition Council for the enrichment of flour and breads.

The Council recommended approval of a printed guide, "Medical and Dental Practices for Schools," contingent on approval by the Committee on Child Health.

The Council recommended that Mr. Rosell contact Dr. H. M. Carryer to discuss the invitation of the Olmsted-Houston-Fillmore-Dodge County Medical Society to hold the 1951 convention in Rochester.

The Council voted to convey to the State Health Relations Committee its approval of their recommendations that consideration be given to suitable licensing laws for Physical and Occupational Therapists in the state, and also recommended that the Committee on State Health Relations contact the Committee on Public Policy and Mr. Manley Brist, relative to the proper drafting of this matter for presentation to the legislature.

The Council referred to the Committee on Interprofessional Relations the recommendation of the American Pharmaceutical Association that a label "See your Physician" be placed on all preparations which carry the legend, "This preparation to be sold only on prescription."

The Council recommended that the House of Delegates pass a resolution supporting Senator Cain's resolution to investigate the administration of the office of social security, a resolution opposing Reorganization Plan No. 27 and H. R. 6000. Dr. Campbell then asked Dr. Reuben F. Erickson, Chairman of the Committee on Public Policy, to explain any proposed resolutions. Dr. Erickson explained that the association was not opposed to social security, per se, but only to weaknesses in administration of financial matters, etc. He then read Senator Cain's resolution, which suggests the creation of a Social Security Commission to advise the Congress and to provide the impartial technical knowledge required. Dr. Erickson urged members of the House of Delegates to return to their communities and write many individual letters to Senators, opposing the adoption of Reorganization Plan No. 27.

The report of the Council was accepted by the House.

At this time, Dr. Sheppard asked Dr. Elias to introduce two guests. Dr. Elias introduced Mrs. Henry E. Bakkila, Duluth, President, Woman's Auxiliary to the Minnesota State Medical Association, and Mrs. David B. Allman, Atlantic City, New Jersey, President, Woman's Auxiliary to the American Medical Association.

Next was the report of the Resolutions Committee, Dr. Wilson, Chairman.

Resolutions Committee Report

WHEREAS, the House of Delegates acknowledges and appreciates the valuable contributions of many groups and individuals to the success of the ninety-seventh annual meeting of the Minnesota State Medical Association,

NOW, THEREFORE BE IT RESOLVED, that specifically the House of Delegates extends thanks:

To the officers and members of the St. Louis County Medical Society, the St. Louis County Medical Auxiliary and the Committee on Local Arrangements for their constant efforts in arranging many parts of the program and in imparting the hospitality of the conference city;

To the management of the Hotel Duluth, Hotel Spalding, Hotel Holland, Hotel 5th Avenue, Hotel Lenox, Hotel McKay, Hotel Lincoln, Hotel Cascade, Hotel Arrowhead and Hotel Hamilton for prompt and courteous attention and service to convention guests and delegates;

To Radio Stations KDAL, WEBC and WREX for making available their facilities for the schedule of broadcasts in connection with the meeting; and

To the *Duluth Herald News-Tribune*, the *Minneapolis Star*, the *Minneapolis Tribune*, the *St. Paul Dispatch*, the *St. Paul Pioneer Press*, the *Associated Press* and the *United Press* for their fine advance notices and excellent coverage of the annual meeting.

* * *

WHEREAS, since the federal food and drug administration released the anti-histamine drugs, for the prevention and treatment of the common cold and hay fever, for sale over the drug store counter, without a physician's prescription, there has been an enormous and very promiscuous use of these drugs, and

WHEREAS, several of the manufacturing drug concerns have recently been cited by the federal government for misrepresenting their products, as the drug supreme in the prevention and treatment of the common cold and hay fever, and

WHEREAS, it is known to the medical profession that the promiscuous use of anti-histamine drugs, has resulted in many untoward reactions, many times serious, causing personal and industrial accidents; and in some instances, deaths have been reported throughout the United States, due to sensitization of over-dosage of these drugs, NOW THEREFORE,

BE IT RESOLVED that the House of Delegates of the Minnesota State Medical Association, in session at the annual meeting in Duluth, Minnesota, June 12, 1950, go on record as opposed to further over-the-counter distribution of these anti-histamine drugs, in order to protect the general public against the continued promiscuous use of these drugs, and

BE IT FURTHER RESOLVED, that we also inform the federal food and drug administration of this action and ask them to stop the uncontrolled use of such drugs and that their use be limited to the written prescription of the patient's physician.

* * *

WHEREAS, the Reference Committee on Medical Economic Reports has considered the report of the standing Committee on Interprofessional Relations and

WHEREAS, in spite of prolonged and diligent efforts on the part of the Interprofessional Relations Committee in the years past, no rapprochement with committees from other interested organizations has yet been reached, and

WHEREAS, no relief of the nursing shortage has so far been obtained, particularly in rural hospitals, and

WHEREAS, the public is becoming increasingly critical of the high cost of hospital care and the deteriorating service due to lack of trained nursing help, and

WHEREAS, present existing hospitals can and would train so-called practical nurses if a statewide uniform minimum curriculum were established, and

WHEREAS, the term "practical" nurse is generally unsatisfactory,

THEREFORE BE IT RESOLVED that the Minnesota State Medical Association go on record as recommending

First, the training of an adequate number of practical nurses, the training period of these nurses not to exceed two years,

Second, that this group of nurses shall have a special title to distinguish them from registered nurses,

Third, that the legislature of Minnesota be requested to create a board separate and distinct from the present Registered Nurses board, to supervise the training and licensing of this group of nurses.

BE IT FURTHER RESOLVED that our committee on Interprofessional Relations together with the committee on Public Policy be instructed to further this action by sponsoring and supporting appropriate legislation at the next session of the state legislature.

* * *

WHEREAS, the Honorable Oscar Swenson of Nicollet County, a member of the Minnesota Legislature for more than thirty years, has had the misfortune of being temporarily incapacitated because of illness; and

WHEREAS, the said Honorable Oscar Swenson has always been an ardent advocate of the highest standards in medicine, including sponsorship of the Minnesota Basic Science Law and reasonable appropriations for the teaching of medicine and the allied healing arts; NOW, THEREFORE,

BE IT HEREBY RESOLVED that the Minnesota State Medical Association, in annual session assembled, does hereby, through its House of Delegates, express our sincerest wishes for the early and complete recovery of the said Honorable Oscar Swenson and assure him of our appreciation for the many contributions that he has made, as a statesman, for the well-being of the people of our state; and

BE IT FURTHER RESOLVED that a copy of this resolution be forwarded to the Honorable Oscar Swenson, as a small token of the esteem in which we hold him.

The House of Delegates approved all of the resolutions.

Election of Officers

The next order of business was the election of officers. The House of Delegates elected the following:

President-Elect—J. F. Norman, M.D., Crookston.
First Vice President—Willard White, M.D., Minneapolis.
Second Vice President—A. E. Brown, M.D., Rochester.
Secretary—B. B. Souster, M.D., St. Paul.
Treasurer—W. H. Condit, M.D., Minneapolis.
Speaker, House of Delegates—C. G. Sheppard, M. D., Hutchinson.
Vice-Speaker—H. M. Carryer, M.D., Rochester.
Councilor, First District—John Waugh, M.D., Rochester.
Councilor, Second District—Roscoe C. Hunt, M.D., Fairmont.
Councilor, Ninth District—A. O. Swenson, M.D., Duluth.

Meeting Place 1951 Convention

The final order of business was the selection of the meeting place for the 1951 annual meeting. The House of Delegates voted to accept the invitation from the Olmsted - Houston - Fillmore - Dodge County Medical Society to hold the meeting in Rochester.

At 3 p.m. the Ninety-seventh Annual Meeting of the House of Delegates of the Minnesota State Medical Association was adjourned.

Constipation in the Aged...

The commonly encountered constipation of the older age group may result from reduced activity, lack of appetite for bulk-producing foods and inadequate ingestion of fluids.

By providing hydrophilic "smoothage" and gently distending bulk, Metamucil encourages normal physiologic evacuation without straining or irritation.

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RESEARCH IN THE SERVICE OF MEDICINE **SEARLE**

✦ Reports and Announcements ✦

SYMPOSIUM ON HYPERTENSION

A Symposium on Hypertension will be presented by the University of Minnesota in honor of Drs. Elexious T. Bell, Benjamin F. Clausen and George E. Fahr on September 18, 19 and 20, 1950.

Monday, September 18

Morning

Greetings
Anatomical Considerations of Hypertension
HARRY GOLDBLATT
Experimental Studies on Hypertension
ARTHUR GROLLMAN
The Relationship of Renin to Experimental Hypertension in the Rabbit
G. W. PICKERING
The Renin-Angiotonin Pressor System
IRVINE H. PAGE

Afternoon

The Participation of Hepatic and Renal Vasotropic Principles in Experimental Renal Hypertension
EPHRAIM SHORR
Blood Volume and Volume of Extracellular Fluid in Experimental Hypertension
EDUARDO BRAUN-MENENDEZ
The Role of the Adrenal Cortex in the Pathogenesis of Experimental Hypertension
HANS SELYE
The Mechnasim of Hypertension Due to Desoxycorticosterone
EDUARDO BRAUN-MENENDEZ
Sympatho-Adrenal Factors in Hypertension
MARK NICKERSON

Evening

Experimental Hypertension
EDUARDO BRAUN-MENENDEZ

Tuesday, September 19

Morning

Pathologic Anatomy in Essential Hypertension
ELEXIOUS T. BELL
Some Observations on Renal Vascual Disease in Hypertensive Patients Based on Biopsy Material Obtained at Operation
REGINALD H. SMITHWICK
The Mechanism of Development of Hypertension in Chromic Genuine Nephrosis
GEORGE E. FAHR
Renal Hemodynamics in Essential Hypertension
HERBERT CHASIS
The Heart in Essential Hypertension
BENJAMIN J. CLAWSON

Afternoon

The Adrenal Cortex and Hypertensive Vascular Disease
GEORGE A. PERERA
The Participation of Hepatic and Renal Vasotropic Principles in Essential Hypertension in Man
EPHRAIM SHORR
Pulmonary Hypertension
RICHARD V. EBERT
Life Situations, Emotions, and Arterial Hypertension
HAROLD G. WOLFF
Vascular Reactivity in Essential Hypertension
E. A. HINES

Evening

The Pathogenesis of Hypertensive Encephalopathy
G. W. PICKERING

Wednesday, September 20

Morning

The Natural History of Hypertensive Vascular Disease
GEORGE A. PERERA
Blood Lipid Transport in Hypertensive Patients and Its Relationship to Atherosclerotic Complications
JOHN W. GOFMAN
The Hemodynamic Effects of Various Types of Therapy in Hypertensive Patients
ROBERT W. WILKINS
Sympathetic Blockade in the Therapy of Hypertension
MARK NICKERSON
The Effect of Sympathectomy upon Mortality and Survival Rates of Patients with Hypertensive Cardiovascular Disease
REGINALD H. SMITHWICK

Afternoon

The Consideration of Life Situations and Emotions in the Management of Patients with Hypertension
HAROLD G. WOLFF
Recent Experiences with Pharmacologic Treatment of Hypertension
ROBERT W. WILKINS
The Dietary Treatment of Hypertension
CARLETON B. CHAPMAN
Pyrogens in the Treatment of Malignant Hypertension
IRVINE H. PAGE

Physicians desiring to attend should address Dr. George N. Aagaard, 3411 Powell Hall, University of Minnesota, Minneapolis 14, Minnesota.

TWIN CITY BLOOD BANKS ARRANGE RECIPROCAL "POOL"

Patients in need of Red Cross blood in either Saint Paul or Minneapolis can now get it easier and faster than before because of a new reciprocal blood "pool" program set up between the Saint Paul Red Cross Regional Blood center and the Minneapolis War Memorial Blood Bank.

Under the new arrangement, patients in Minneapolis or Saint Paul hospitals from counties participating in the Red Cross program can now receive blood immediately when needed from the blood bank in the city in which they are hospitalized. Such patients are under no obligation to have friends or relatives replace this blood, because it will be furnished by the blood bank in which their donor club takes part.

For instance, a patient in a Minneapolis hospital from a county which participates in the Red Cross blood program and which has credit for blood in Saint Paul, can receive blood when needed from the Minneapolis War Memorial Blood Bank. It will be replaced by the Saint Paul Regional Blood Center. Likewise, members of donor clubs in the Minneapolis War Memorial Blood Bank who may become patients in Saint Paul hospitals

(Continued on Page 830)

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TWIN CITY BLOOD BANKS ARRANGE RECIPROCAL "POOL"

(Continued from Page 828)

can receive blood there from the Saint Paul Red Cross Regional Blood Center. The blood will be replaced from the particular donor club's credit at the Minneapolis War Memorial Blood Bank.

The new program, set up through the efforts of Dr. E. V. Goltz, Medical Director of the Saint Paul Red Cross Regional Blood Center and G. Albin Matson, Director of the Minneapolis War Memorial Blood Bank, was developed because of various complications in the previous system.

With the new system, the patient from a Red Cross participating county, hospitalized in either city, receives the same benefits as are received by patients who are members of donor clubs in the Twin Cities.

INTERNATIONAL COLLEGE OF SURGEONS

The fifteenth annual assembly of the United States Chapter of the International College of Surgeons will be held in Cleveland, Ohio, October 31 to November 3, with headquarters at the Cleveland Hotel.

Surgical clinics will be held in several Cleveland hospitals on Monday, October 30. All scientific sessions will be held at the Cleveland Public Auditorium 9:00 a.m. to 5:00 p.m., Tuesday through Friday. A most excellent program has been arranged at which time some of the most prominent surgeons of America, and some foreign speakers, will discuss the current contemporary surgical scene.

Through the courtesy of Smith, Kline and French Laboratories, a fine colored television program of surgical procedures, originating from the St. Vincent's Charity Hospital, Cleveland, will be shown daily in the auditorium from 9:00 a.m., to 1:00 p.m. Motion pictures will also be presented each day depicting many of the recent advances in surgery and surgical technique.

One of the highlights of the meeting will be the annual banquet at the Statler Hotel on Thursday evening when America's great surgeon, Dr. Frank Lahey of Boston, will talk on "Some of the Recent Advances in Surgery." Dr. Elmer Henderson, President of the American Medical Association, will deliver an address on "The Importance of International Co-operation in Surgery."

Reservations may be secured by writing to the Committee on Hotels, International College of Surgeons, 511 Terminal Tower, Cleveland 13, Ohio. Preliminary programs may be obtained from the central office, 1516 Lake Shore Drive, Chicago 10.

AMERICAN ROENTGEN RAY SOCIETY

The American Roentgen Ray Society will hold its fiftieth anniversary meeting in St. Louis, September 26-29.

The scientific sessions and the scientific and commercial exhibits will be held in the Hotel Jefferson in St. Louis.

This year's Caldwell Lecture will be delivered on September 27 by Dr. Henry L. Bockus, professor and chairman of the Department of Internal Medicine in the Graduate School of Medicine, University of Pennsylvania, Philadelphia. His subject will be "The Role of Roentgenology in Gastroenterology."

The convention program is being arranged by a committee headed by President-elect B. P. Widmann, M.D., of Philadelphia.

The society president is Dr. U. V. Portmann, of Cleveland.

NEW FILM ON CANCER

"Self-Examination of the Breast" is the name of a new sound, color, 16 mm. film that has been produced by the Cancer Institute and the American Cancer Society.

This film demonstrates how women can and should systematically examine their breasts to detect changes that may be due to early cancer. Change of contour, size dimpling, and lumps are stressed, with advice to make examinations of the breasts periodically and go to the doctor at once if anything unusual is detected. This film will be shown widely to groups of women throughout Minnesota.

"All practicing physicians should see this film so that they will be familiar with the instructions in self-examination their patients are attempting to carry out and have an understanding attitude towards the many women who will come to their office because they think they have discovered something wrong," says Dr. A. H. Wells, president of the Minnesota Division, American Cancer Society.

The Minnesota Division of the American Cancer Society and the Minnesota Department of Health have prints of the film, and arrangements can be made to show it at county medical society meetings or hospital staff meetings.

RESEARCH IN ARTHRITIS

The Arthritis and Rheumatism Foundation is offering fellowships for research in the basic sciences related to the study of arthritis. These fellowships carry a stipend of from $4,000 to $6,000, depending upon the needs and ability of the worker, and run for a period of one year. The fellowships would begin in July, 1951, although earlier appointments would be considered by the committee.

The Foundation is eager to back a candidate, rather than a project, an institution, or a hospital. It hopes to arouse interest in arthritis in a wider circle of medical investigators and to encourage able, inquiring minds.

Applications should be sent to the Arthritis and Rheumatism Foundation, 535 Fifth Avenue, New York 17, New York, by January 1, 1951. Notification of the fellowships granted will be made March 1, 1951.

If any applications are received by September 15, 1950, they will be acted on at that time and notification made immediately.

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CRIPPLED CHILDREN SERVICES

The 1950 Fall Clinic Schedule of the Division of Social Welfare, Medical Services Unit, Crippled Children Services, is as follows:

Place	*Date*	*Building*	*Counties*
Winona	September 9	Central School	Winona Wabasha Olmsted Fillmore Houston
Marshall	September 16	High School	Lyon Lincoln Redwood Yelow Medicine Lac qui Parle
Fergus Falls	September 23	High School	Otter Tail Wilkin
Bemidji	September 30	High School	Beltrami Clearwater Hubbard
Virginia	October 7	Technical High	St. Louis
Crookston	October 14	High School	Polk Mahnomen Norman
Little Falls	October 21	High School	Morrison Todd Mille Lacs
Willmar	October 28	Auditorium	Kandiyohi Swift Chippewa Renville Meeker McLeod
Mankato	November 4	Franklin School	Blue Earth Sibley Nicollet LeSueur Watonwan Brown Waseca Martin Faribault
Anoka	November 11	Lincoln School	Anoka Isanti Chisago Washington Hennepin Ramsey

MINNESOTA SOCIETY OF CLINICAL PATHOLOGISTS

The annuual session of the Minnesota Society of Clinical Pathologists was held in Duluth, June 12, 1950, during the annual meeting of the Minnesota State Medical Association. It was featured by the Society's annual A. H. Sanford Lecture before a general session of the association by Ancel Keys, Ph.D., on the subject of "Diet and Cardiovascular Disease," and by an all-day tumor seminar under the direction of Dr. Robert Hebbel of the University of Minnesota, and his associates, Drs. John McDonald and Malcolm Dockerty of the Mayo Clinic. The seminar was made possible by a grant of $300.00 contributed by the Minnesota Division of the American Cancer Society, and attended by thirty members who expressed enthusiastic approval of the manner in which it was conducted, and of the material presented. The Society voted to make the seminar an annual feature event. The fall meeting is scheduled in Minneapolis. The officers elected for the ensuing year are: President, John F. Noble; Vice president, James McCartney; Secretary-Treasurer, Kano Ikeda; Councillors, John McDonald, William Knoll, and Nathaniel Lufkin.

COURSE IN POSTGRADUATE GASTROENTEROLOGY

The National Gastroenterological Association is again offering a course in postgraduate gastroenterology on October 12, 13, and 14, at the Hotel Statler in New York City, immediately following the fifteenth annual convention, to be held at the same place on October 9, 10 and 11.

The course will be under the personal direction of Dr. Owen H. Wangensteen, of the University of Minnesota Medical School, who will be the surgical co-ordinator, and Dr. I. Snapper, of Mt. Sinai Hospital and the College of Physicians and Surgeons, Columbia University, who will be the medical co-ordinator. They will be assisted by a distinguished faculty.

The course is open to members and non-members of the Association who have had adequate preliminary training. However, preference in registration will be given to members of the Association. The course will not be available under the provisions of the GI Bill of Rights because of the many difficulties in obtaining certificates of eligibility and other necessary Veterans Administration forms.

The fee is $25 for the three days for those affiliated with the National Gastroenterological Association, and $35 for non-members. Registration blanks may be obtained from Mr. Daniel Weiss, 1819 Broadway, New York 23, N. Y.

POSTGRADUATE SEMINARS

The University of Minnesota School of Medicine in conjunction with the Minnesota State Medical Association and the Minnesota Department of Health will hold six professional medical postgraduate seminars throughout Minnesota during 1950-1951.

The areas, together with approximate attendance dates, are these:

1950

Crookston—September 13 to November 1
Virginia—September 21 to November 9

1951

Moorhead—January 3 to February 21
Willmar—January 11 to March 1
Worthington—March 6 to April 24
Albert Lea—March 14 to May 2

The seven courses held throughout the state in 1949-50 were extremely well received and professional attendance and interest was excellent.

Heart disease, cancer control, and mental health will be the subjects of this year's programs. Latest information on the diagnosis, treatment, and management of diseases in these three fields will be presented by leading medical lecturers from the University of Minnesota School of Medicine. Professional films and literature will in some instances be used to augment the speakers.

(Continued on Page 834)

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The Hazelden Foundation is a nonprofit organization. All inquiries are kept confidential.

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POSTGRADUATE SEMINARS

(Continued from Page 832)

Each seminar, as last year, will consist of eight consecutive weekly meetings, with each session about two hours long. Ordinarily two speakers, each on a different subject matter, will appear.

There is no charge for this series of lectures unless local physicians voluntarily assess themselves $2.00 each to obtain a certificate of attendance.

County medical societies are actively cooperating in the organization and conduct of these significant medical education events.

Coincident with these medical seminars, dentists and nurses of the area will hold eight sessions of their own, patterned generally after the physicians' courses, with subject matter tailored to their specific interests. The University of Minnesota Schools of Dentistry and Nursing, the Minnesota State Dental Association, the Minnesota State Nurses' Association, and local dental and nursing groups sponsor the seminars.

Other co-sponsors of the seminars are: The Minnesota Division of the American Cancer Society, the Minnesota Heart Association, and the Minnesota Mental Hygiene Society.

CONTINUATION COURSE

Female and male infertility will be the subject of the continuation course to be presented by the University of Minnesota on September 28-30. The course, intended for physicians specializing in obstetrics and gynecology, will be presented at the Center for Continuation Study. Distinguished visiting physicians who will participate as faculty members will include Dr. Warren O. Nelson, University of Iowa College of Medicine; Dr. Isador C. Rubin, Mount Sinai Hospital and New York University College of Medicine; and Dr. Fred A. Simmons, Harvard University Medical School. Staff members of the University of Minnesota and the Mayo Foundation will complete the faculty for the course.

Key topics which will be discussed during the three-day course include psychosomatic aspects of sterility, the investigation and management of the infertile couple, the management of amenorrhea, and artificial insemination.

SOUTHERN MINNESOTA MEDICAL ASSOCIATION

The Southern Minnesota Medical Association will hold its annual meeting on Monday, September 11, at Mankato, Minnesota. All physicians are welcome at the meeting, and applications for membership will be considered during the business meeting.

The program for the meeting is as follows:

"Hospital Management of Asthma" by Dr. Giles Koelsche of Rochester.

"Basic Facts About Gallbladder Surgery for General Physicians" by Dr. David P. Anderson of Austin.

"Common Injuries of the Knee Joint" by Dr. E. D. Henderson of Rochester.

"Thrombocytogenic Purpura" by Dr. Charles Stroebel of Rochester.

"Antabuse in the Treatment of Alcoholism" by Dr. J. C. Michael of Minneapolis.

"Trauma to Urethra and Bladder in Association with Pelvic Fractures" by Dr. E. J. Richardson of St. Paul.

"Urinary Acetone: Its Detection and Value in Treating Ambulatory Diabetics" by Dr. B. J. Mears of St. Paul.

"Management of Spontaneous Pneumothorax" by Dr. W. R. Schmidt of Minneapolis.

"Differential Diagnosis of Low Back and Sciatic Pain" by Dr. H. J. Svien of Rochester.

"Operative Measures to Improve Circulation in Arteriosclerosis Obliterans" by Dr. F. W. Quattlebaum of St. Paul.

"Emergencies in the Newborn Period" by Dr. L. E. Harris of Rochester.

"Acute Yellow Atrophy of Liver from S. H. Virus, Transmitted by a Blood Bank" by Dr. Winston R. Miller of Red Wing (Case Report).

"Shattered Kidney in Four-year-old Child" by Dr. R. I. Gruys of Windom (Case Report).

"Low Backache with Sciatic Pain" by Dr. L. I. Younger of Winona (Case Report).

PENNINGTON COUNTY SOCIETY

The Pennington County Medical Society was organized at a dinner meeting in Thief River Falls on June 29. It was announced that officers would be elected at a later meeting.

The initial meeting was highlighted by six guest speakers from the University of Minnesota Medical School who were on their way to Lake of the Woods for a brief fishing expedition. The six speakers were Dr. Clarence Dennis, Dr. Howard Horns, Dr. Arnold J. Kremen, Dr. Lyle Hay, Dr. Robert Hebbel and Dr. Robert Huseby.

SOUTHWESTERN MINNESOTA MEDICAL SOCIETY

The Southwestern Minnesota Medical Society held its regular monthly meeting at Worthington on June 26. Principal speaker of the evening was Dr. Rudolph W. Koucky, Minneapolis, who discussed advances in the diagnosis and treatment of diseases of the blood.

Dr. and Mrs. F. M. Manson, Worthington, were honored guests at the dinner meeting in recognition of the physician's having just become a member of the Fifty Club of the Minnesota State Medical Association.

The BCG vaccination campaign against tuberculosis is progressing throughout the world. As of March 1, twenty million children and young adults have been tested, and about ten million vaccinated against tuberculosis. Mass vaccination campaigns were completed in Czechoslovakia and Finland last summer, and will finish in Poland this spring. Work is under way in Austria, Greece, Yugoslavia, Morocco, Ceylon, India, Pakistan, Algeria, Tunisia, Italy, Egypt, Israel and Lebanon. Campaigns will soon begin in Syria, Malta, Mexico and Ecuador. BCG vaccination campaigns are a joint enterprise of UNICEF, Scandinavian relief societies and WHO.—*WHO Newsletter*, February-March, 1950.

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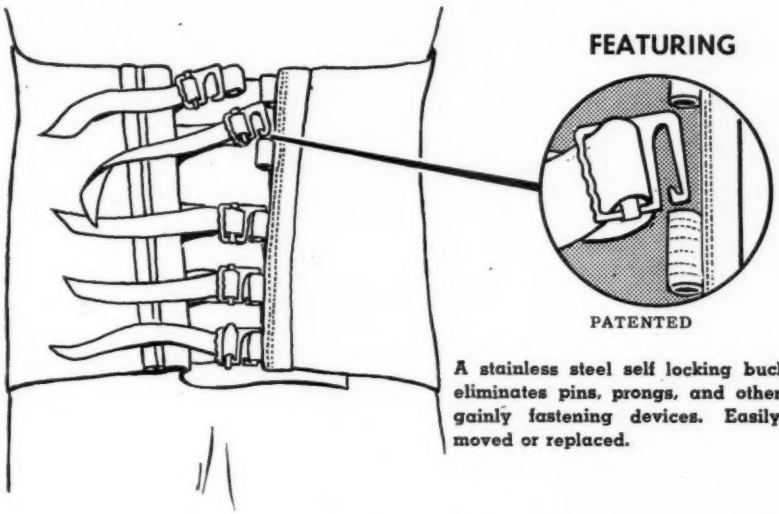

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In Memoriam

ERNEST L. BAKER

Dr. Ernest L. Baker of Minneapolis passed away July 20, 1950, just five days after celebrating the fortieth anniversary of his practice in Minneapolis.

Dr. Baker was born in Ithaca, Michigan, January 9, 1880. He attended the University of Michigan at Ann Arbor and the North Dakota Agricultural College and taught for five years as principal of grade and high schools in North Dakota, Iowa City and Fairmont. He then attended medical school at the University of Minnesota, where he received his medical degree in 1909. He was the first intern at the University Hospital, where he served from March 10, 1909 until July, 1910, in the building on Washington Avenue which had been converted from a former residence into a hospital and was used as such until the construction of the first unit of the present University Hospitals.

While in general practice, Dr. Baker maintained an office in Southeast Minneapolis. He was associated with Dr. George Douglas Head for a number of years.

Dr. Baker was a member of the Hennepin County Medical Society, the Minnesota State Medical Association and the American Medical Association. He was also a member of Alpha Omega Alpha, honorary medical society, and Nu Sigma Nu, undergraduate medical fraternity.

Dr. Baker is survived by his wife, Ethel Bliss Baker; a son, Dr. Milton E. Baker; a daughter, Priscilla Baker Cross; a brother, Henry C. Baker, Portland, Oregon; a sister, Mrs. William Newell, Onstet, Michigan, and four grandchildren. A son, Douglas Baker, preceded his father in death. Mrs. Baker had the distinction of being desigated "Minnesota Mother" in 1944.

BERTON J. BRANTON

Dr. B. J. Branton, mayor of Willmar commonly known as B. J., died on May 9, 1950. He was president of the Minnesota Public Health Association and was in the midst of the x-ray campaign being conducted in Kandiyohi County when stricken.

Dr. Branton was born in Willmar, September 20, 1883. He graduated from the University of Minnesota medical school in 1905 and interned at the Budd Hospital at Two Harbors and at St. Barnabas Hospital in Minneapolis.

Dr. Branton founded the Willmar Hospital in 1937. He was most active in local affairs. At the time of his death he was vice president of the Bank of Willmar, a member of the Board of the Kandiyohi County Fair, president of the Willmar Shrine Club, as well as mayor of Willmar. He had been Coroner of Willmar for a period of twelve years and was a past president of the Elks and the Kiwanis clubs. He had been president of the Willmar Chamber of Commerce and chairman of the Kandiyohi County Historical pageant held in 1949. He had been president of the Kandiyohi-Swift County Medical Society, president of the Northern Minnesota Medical Association, and in 1941 was president of the Minnesota State Medical Association. He was also a member of the American College of Surgeons, the Kandiyohi-Swift County Medical Society, the Minnesota State Medical Association and the American Medical Association. He was head of the Willmar Clinic, which he established at the time the Rice Hospital opened. He also headed the Branton Properties and the Branton Foundation. According to newspaper accounts, he was Willmar's leading citizen.

On July 11, 1906, he was married to Alice A. Brown. Surviving are one son Calvin F. Branton of Saint Paul and two daughters, Alice (Mrs. Clifford Marlow) of Willmar and Elizabeth (Mrs. Chester I. Miller) of Minneapolis.

* * *

It is a great privilege to pen a tribute to our recently departed comrade, Bertram J. Branton. Nothing would be added by enumerating again the many honors bestowed upon him and the distinguished services he rendered in various capacities; so briefly I shall mention some of the characteristics which distinguished him.

He lived an efficient well-balanced life from youth to maturity.

He was a man of high intelligence, and one who had his mind under control, constantly holding it to some worthwhile endeavor.

He was a shrewd businessman, but never allowed his personal desires to overbalance the public good.

He was an ambitious man, but his ambitions were chiefly directed towards the public interests.

He was an able physician and surgeon, using his skill not so much for personal aggrandizement as for the public welfare.

He was public spirited, giving of his time and talents to advance the interest of his community and to promote the welfare of the state and country.

He was a moral man and lived by his ideals day in and day out.

Bertram J. Branton is one of the rare examples of a man who throughout life had courage and force of character sufficient to live each day in the best way possible. He died with no worry about what he should or should not have done.

We physicians are justified in a feeling of pride that, as a group, we have produced more men of this type than any other group; and in particular, the Minnesota State Medical Association can be proud that it has contributed more than its share of such men. May we ever hold high the standard of service exemplified by Bertram J. Branton.

W. L. Burnap, M.D.

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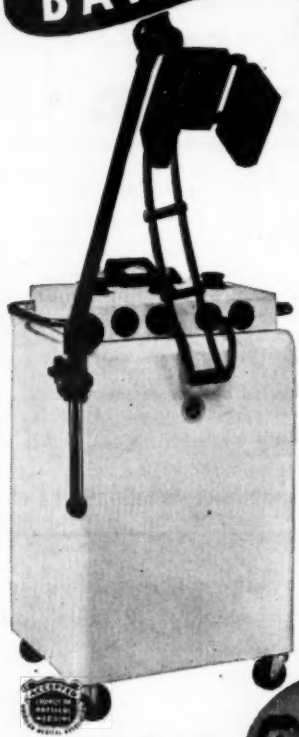

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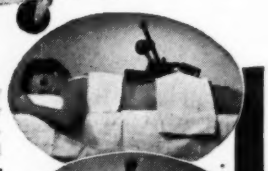

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ARCHIBALD E. CARDLE

On June 23, 1950, in the worst air disaster in American history, Medicine lost one of its most able and distinguished members, and one of its most sincere and untiring servants. The entire medical profession, his friends and patients mourn the death of Dr. A. E. Cardle.

Dr. Cardle was born in El Reno, Oklahoma, April 27, 1899. He was graduated from the University of Iowa medical school in 1923, served an internship at Maryland General Hospital and a residency at the Minneapolis General Hospital. He entered practice in Minneapolis, associating himself with Dr. J. G. Cross in the practice of internal medicine. After Dr. Cross' death, he continued alone.

Dr. Cardle had been a delegate to the House of Delegates of the Minnesota State Medical Association, Councilor for the Sixth District for six years before becoming President of the Minnesota State Medical Association in 1948, the Association's youngest President. Since 1946 he had been Secretary of the Minnesota Academy of Medicine.

He had been named a delegate from Minnesota to the 1950 meeting of the American Medical Association and was returning from the East preparatory to leaving for San Francisco when he died, one of fifty-eight lost that stormy night over Lake Michigan.

In final tribute to a fine man and a good doctor, may I say in behalf of those who knew him well that to work with "Arch" was a joy and a privilege.

His excellent judgment helped steer Medicine through some turbulent times. He had a rare faculty for understanding the public's reaction toward the medical profession and was unexcelled in interpreting Medicine's accomplishments and objectives to the public.

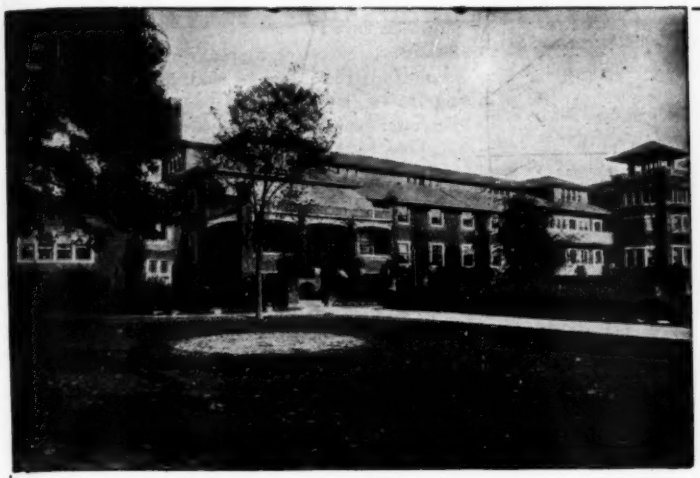
In his capacity as chairman of the Public Health Education Committee, Arch played the leading role in our successful efforts to swing an enlightened public against compulsory health insurance.

The advertising campaign now being so extensively conducted in the newspapers throughout the state is largely Arch's "brain child," and was prepared under his direction by an experienced and talented public relations expert. In national medical circles, he was receiving increasing recognition for his sincere and effective efforts in public education and, had he been spared, unquestionably he would have been called upon to expand his activities beyond our own state.

Arch's modest demeanor, his exceptional kindliness, unfailing optimism and good humor will be sorely missed by all who have been privileged to enjoy his friendship.

He is survived by his wife, Edith, and two children, Mary and John.

ORWOOD J. CAMPBELL, M.D.



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225 Sheridan Road **Phone Winnetka 6-0211**

OSCAR J. ESSER

Dr. Oscar J. Esser, of New Ulm, a specialist in eye, ear, nose and throat diseases, died July 7, 1950, at the age of forty-eight.

Oscar Esser was born September 27, 1901, in Dane County, Wisconsin. He moved with his parents to New Ulm as a child. His medical education was obtained from Marquette University medical school where he graduated in 1927.

He practiced for short periods at Ossian, Iowa, and later at Gibbon and New Ulm, maintaining offices in both towns. He then practiced at Tracy for a time. Two years ago he entered the New York City Polyclinic and took a special course in eye, ear, nose and throat diseases. He returned to New Ulm to practice but maintained his home at Gibbon.

Dr. Esser was a member of the Brown County Medical Society, the Minnesota State Medical Association and the American Medical Association.

Dr. Esser married Florence Stadtherr of Gibbon November 27, 1924. He is survived by his widow, two sons and a daughter. His mother, three brothers and three sisters also are living.

JOHN S. KILBRIDE

Dr. John S. Kilbride of Canby, Minnesota, passed away June 5, 1950, following an injury received in an automobile accident shortly before Christmas in 1949. He was eighty-four years of age.

Dr. Kilbride was born at Zwingle, Iowa, December 23, 1865. He attended high school at Dubuque, Iowa, and the Iowa State Academy at Iowa City. He received his M.D. degree from the College of Physicians and Surgeons at the University of Illinois in 1893. He took postgraduate work at the New York and Chicago Postgraduate schools and in 1910 continued his studies in Vienna.

He began practice in Dawson, Minnesota, in 1898 and after a year went to Sleepy Eye, where he practiced for a year before going to Canby. After returning from Vienna in 1910 he practiced at Watertown, South Dakota, for four years. In 1915 he and Dr. L. J. Holmberg formed a partnership in Canby which continued until 1936 when he joined his son, Dr. Edwin Kilbride, in Worthington. In 1943 he returned to Canby to practice until the war ended in 1945, when he returned to Worthington.

He was a former member of Nobles County Medical Society, the Minnesota State Medical Association and the American Medical Association.

Dr. Kilbride is survived by his son, Dr. Edwin Kilbride of Worthington, Linnae Kilbride, an attorney in Hastings, Zylpha Kilbride of Evanston, Illinois, and Kathleen (Mrs. Nelson Knoop) of DesPlaines, Illinois.

VERNON L. HART

Dr. Vernon L. Hart, well-known orthopedic surgeon of Minneapolis, drowned in Cedar Lake, Minneapolis, on July 12, 1950. He was fifty-one years of age.

Dr. Hart was born in Huron, Ohio, October 24, 1898. He obtained his M.D. degree from the University of Michigan in 1924 and took further training in surgery at the University Hospital, Ann Arbor, from 1924 to 1932.

Dr. Hart practiced at Dayton, Ohio, from 1932 to 1933, when he moved to Minneapolis to take over the orthopedic practice of the late Dr. Emil Geist. He was known for his work on congenital dislocation of the hip before he moved to Minneapolis.

Dr. Hart was a Fellow of the American College of Surgeons, a diplomate of the American Board of Orthopedic Surgeons, a member of the American Academy of Orthopedic Surgeons, the Clinical Orthopedic Society, the Minnesota Academy of Medicine, the Hennepin County Medical Society, the Minnesota State Medical Association and the American Medical Association.

Dr. Hart held the rank of Lieutenant Colonel in World War II and headed the orthopedic service at several army hospitals. He was also a member of the National Research Council and was a civilian consultant to the Surgeon General of the United States Army on a six-weeks inspection of the American Zone of Germany in in 1948.

Survivors are his wife and daughter, Louisa K.; a sister, Mrs. Vanessa Campbell of Huron, Ohio, and a brother, Vincent, of Cleveland, Ohio.

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HORATIO B. SWEETSER

Dr. Horatio B. Sweetser, a prominent surgeon of Minneapolis until his retirement in 1933, died May 23, 1950, at the age of eighty-eight.

Dr. Sweetser was born in Brooklyn, New York, July 13, 1861. He graduated from St. John's College in Brooklyn in 1877 and received his medical degree from the College of Physicians and Surgeons in New York in 1885. After interning at St. Francis Hospital, New York City in 1885-1886 he practiced in New York City for a brief period before coming to Minneapolis in 1887.

He was professor of anatomy and surgery at Hamline University Medical School and later at the University of Minnesota Medical School after the two schools were merged. He was a charter member of St. Mary's Hospital in Minneapolis, having been a member since 1887 and was chief of staff for many years.

Among the many organizations of which Dr. Sweetser was a member may be mentioned: the American College of Surgeons, the Western Surgical Association, the Minnesota Academy of Medicine of which he was president in 1919, the Minneapolis Surgical Society of which he was president in 1927, the Hennepin County Medical Society of which he was president in 1899-1900, the Minnesota State Medical Association and the American Medical Association.

He belonged to Phi Rho Sigma, the undergraduate medical fraternity and was a member of the Minneapolis Club, the Minneapolis Auto Club and the Bloomington Golf Club.

Dr. Sweetser is survived by two sons, Dr. Theodore H. Sweetser and Dr. Horatio B. Sweetser, Jr., of Minneapolis; and two daughters, Mrs. Frank Preston of Minneapolis and Mrs. Elizabeth Albrecht of Belle Plaine.

Dr. Sweetser was a fine gentleman and an expert surgeon. His pleasing personality and character won him a multitude of friends.

KENNETH G. WILSON

Word has been received of the death of Dr. Kenneth G. Wilson on June 19, 1950.

Dr. Wilson, who was a former fellow in ophthalmology and aviation medicine at the Mayo Foundation, was born in Minneapolis on August 27, 1915. He received his M.D. from the University of Minnesota and interned at St. Luke's Hospital in San Francisco. He entered the Mayo Foundation as a fellow in ophthalmology in July, 1941; later, he became interested in, and transferred his major subject to, aviation medicine. He left the Mayo Foundation in February, 1943, to go to Cleveland to practice aviation medicine and later moved to San Diego. At the time of his death he was residing in Laguna Beach, California.

Dr. Wilson was a member of the Psi Upsilon and Nu Sigma Nu fraternities.

Tuberculosis rates . . . rose in every European country seriously affected by the war, and there is now a growing realization in Europe that tuberculosis is our main public health problem.—MARC DANIELS, M.R.C.P., D.P.H., *British Medical Journal*, Nov. 12, 1949.

Woman's Auxiliary

AUXILIARY REPORTS AT AMA CONVENTION

The Woman's Auxiliary to the Minnesota State Medical Association reported to the national convention in San Francisco in June. Mrs. Charles W. Waas, the new president, read the report of the immediate past president, Mrs. H. E. Bakkila.

Highlights from the report state that Minnesota has twenty-nine auxiliaries and one branch, all working closely with their medical societies. Area health and guest days are gaining in popularity. Lay groups assist in planning and all voluntary health organizations are exhibitors. A book on health day procedure has been written with the aid of the State Department of Health. The Auxiliary sponsored the nineteenth annual State High School radio contest on tuberculosis.

A Public Relations Workshop, co-sponsored by the Minnesota State Medical Association, was held, consisting of a panel discussion of "Fundamentals of Community Health Education Program." Such media as press relations, distribution of literature, speakers bureau, radio, exhibits, personal contacts and health days were discussed. A new project is a "Five-Point Basic Program for Improvement of School Health Services."

During the year, the Auxiliary was visited by Mrs. David Allman, national president, and Mrs. Paul Craig, national public relations officer.

All county auxiliaries have had health education as their main project. One auxiliary had a study group, presenting such topics as "Your Hospital Dollar and Where It Goes," and "Co-operative Medicine." The president of the Minnesota State Medical Association addressed them. Another auxiliary sponsored a weekly radio program, "Your Health Hour." Most auxiliaries have volunteered their services, as well as financial aid, to the Cancer Society, Christmas seal sales, Red Cross drives, the Society for the Prevention of Blindness, the Mental Hygiene Society, the Nurses Scholarship and the Heart Association. The Auxiliary has a representative on the State Nutrition Committee, also many members are serving on boards and as officers of clubs throughout the state. One member is president of the state branch of the American Association of University Women.

Cooperation of officers and the aid of every individual member have combined to produce a successful year for the Woman's Auxiliary to the Minnesota State Medical Association.

MRS. BENJAMIN B. SOUSTER
Saint Paul

Of General Interest

Ground-breaking ceremonies for the twenty-two-story **Mayo Memorial Medical Center** at the University of Minnesota were held on July 5. Dr. J. L. Morrill, president of the University, turned the first shovelful of earth at the site of the structure in the quadrangle in front of the University Hospitals. Principal speaker for the occasion was Dr. Donald J. Cowling, chairman of the committee of founders of the Mayo Memorial.

It is expected that the $12,000,000 structure will be ready for occupancy in 1953. When completed, it will contain laboratories, classrooms, staff offices, three auditoriums, an underground garage, operating and hospital rooms, medical library, and quarters for research animals. The tower section will rise 250 feet above the ground.

* * *

Dr. Murray H. Hunter, formerly of Ancker Hospital, Saint Paul, has become associated in practice with Dr. A. H. Field of Farmington. A graduate of the University of Marquette Medical School, Dr. Hunter recently completed his internship at Ancker Hospital.

* * *

A testimonial dinner was given for **Dr. W. H. Valentine,** of Tracy, on May 27 by patients and fellow physicians in recognition of Dr. Valentine's fifty years of medical service to Tracy. The dinner was attended by 350 friends from Wisconsin and South Dakota as well as Minnesota.

Mr. William R. Mitchell presided as master of ceremonies, and the principal address was given by Dr. Roscoe C. Webb, of Minneapolis, a native of Amiret, who paid tribute to Dr. Valentine's service to the community. Other members of the profession called upon for remarks were Dr. H. J. Nielson, Dr. J. K. Helferty, Dr. W. G. Workman, Dr. G. W. Ferguson and Dr. R. R. Remsberg. Dr. S. A. Slater, Worthington, presented the honored guest with a certificate of recognition for his part in tuberculosis control and his work as president of the Lyon County Public Health Association for twenty-nine years. Congratulations were received from Governor Youngdahl and prominent medical and educational leaders in the state. Especially cherished was a telegram from the Sisters of St. Joseph, St. Mary's Hospital, Minneapolis. Dr. Valentine is the oldest living ex-intern of that hospital.

* * *

Dr. Wesley W. Spink, of the University of Minnesota Medical School, has been elected to the board of governors of the American College of Physicians. He will be governor for the organization in Minnesota until 1953. Dr. Spink was also given an honorary degree of Doctor of Science from Carleton College in June.

Dr. Richard A. Knudson, Forest Lake, announced late in June that he planned to leave his practice in Forest Lake about July 30 and move to Black River Falls Wisconsin. Dr. Knudson began his practice in Forest Lake in August, 1948. He was associated with Dr. J. A. Poirier for almost two years.

* * *

At a meeting of the North Dakota State Pediatric Society in Grand Forks on May 29, **Dr. Albert V. Stoesser,** Minneapolis, gave a talk at a luncheon and conducted a round-table discussion on "Modern Drug Therapy in Allergy." On the same day he spoke at the sixty-third annual meeting of the North Dakota State Medical Association in Grand Forks, discussing "Respiratory Allergy in Children."

In June, Dr. Stoesser attended the annual session of the AMA in San Francisco and spoke before the Section on Pediatrics on June 28. His subject was "Antihistamines in the Treatment of Allergic Diseases in Children."

* * *

After ten years of association with the Gamble Clinic in Albert Lea, **Dr. E. S. Palmerton** left on July 1 to specialize in ophthalmology at the University of Minnesota. Also on July 1, the Gamble Clinic changed its name to Nelson and Erdal, Physicians and Surgeons. It was announced that on August 1, Dr. Leonard M. Ellertson of Muncie, Indiana, would join the group in Albert Lea.

* * *

Dr. John L. Juergens has become associated with his father, Dr. H. M. Juergens, in the practice of medicine in Belle Plaine. A graduate of the Harvard Medical School, the younger Dr. Juergens interned at Minneapolis General Hospital.

* * *

On the evening of June 3, the medical department of the **University of Minnesota Medical School,** some 100 strong, attended a banquet at the Minneapolis Club in honor of three professors of medicine who have contributed outstanding service to the school—Dr. Henry Ulrich, Dr. S. Marx White and Dr. George Fahr.

It was Dr. Henry Ulrich who, as clinical professor of medicine, built up the University medical service at the Minneapolis General Hospital before it was taken over by Dr. George Fahr as full-time professor of medicine and chief of the medical service in 1927. More recently Dr. Ulrich taught at the University Hospitals until his retirement as emeritus professor in July, 1944. Dr. Fahr became emeritus professor on June 15 of this year. Dr. S. Marx White has given many years to teaching medicine at the University and was head of the department from

(Continued on Page 844)

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(Continued from Page 842)

January, 1921, to November, 1925. He became emeritus professor in July, 1942.

Dr. Reuben Johnson, as toastmaster, entertained the banqueters with an apparently inexhaustible supply of stories, and tribute was paid to the honor guests by Drs. Lowry, Watson and Schaaf.

* * *

Dr. Gordon R. Kamman, Saint Paul, presented a paper on June 21 before the AMA Section of Nervous and Mental Diseases. His subject was "Traumatic Neurosis, Compensation Neurosis, or Attitudinal Pathosis?"

* * *

Dr. J. R. Harrie, formerly of Eveleth, began a three-year residency in radiology at the University of Michigan on July 1. Dr. Harrie became associated with the More Hospital in February, 1949, maintained offices in the More-Ewens Clinic in Virginia, and was city health officer at Mountain Iron.

* * *

Two Rochester couples sailed from New York on July 8 for a two-month trip through Europe. They were Dr. and Mrs. B. E. Hall and Dr. and Mrs. J. M. Stickney. For the two physicians, however, the trip was not planned to be just a vacation. Both Dr. Hall and Dr. Stickney were scheduled to speak at a meeting of the International Society of Hematology in England during August. In addition, Dr. Stickney spoke at the Fifth International Cancer Congress in Paris late in July, and Dr. Hall was scheduled to be on the program at the First International Congress of Internal Medicine in Paris during September.

* * *

An editorial in the *Crookston Daily Times* on July 11 paid tribute to **Dr. M. O. Oppegaard** as he began his fortieth year in the practice of medicine. After ten years of practice in various hospitals in the East, in New London and in Minneapolis, Dr. Oppegaard moved to Crookston in 1920. During his years there he has served in numerous civic and professional capacities, usually managing to handle several tasks simultaneously. He has been mayor of the city for three terms and holds that office at present.

* * *

Grants for cancer research announced by the Public Health Service on July 7 total $1,160,818. These awards will support cancer research in hospitals, universities and other non-federal institutions in thirty states and the District of Columbia. The grants were made by the National Cancer Institute following recommendations by the National Advisory Cancer Council and approval by Dr. Leonard A. Scheele, Surgeon General of the Public Health Service. Included are the following grants to the University of Minnesota: $8,023 to Dr. Edward Eaton Mason for investigation of gastric secretion and stomach cancer; $3,978 to Dr. Sheldon C. Reed for the study of biology of human breast cancer with particular emphasis upon heredity; $7,685 to Dr. Claude R. Hitchcock for chemical induction of stomach cancer in inbred strains of mice; $14,040 to Dr. Julian Wild for studying normal and malignant tissues by the use of ultrasound.

* * *

Dr. Robert L. Merrick has become associated with Dr. Wallace P. Ritchie at 917 Lowry Medical Arts Building, Saint Paul, for the practice of neurosurgery. Dr. Merrick is a native of Corydon, Iowa, and received his medical degree at the University of Minnesota in 1945. After serving in the Army for two years, he completed a residency in neurosurgery first at the Neurological Institute of New York and recently at the University Hospitals in Minneapolis.

* * *

Dr. Ralph Buesgens has opened offices in Waterville for the practice of medicine. A graduate of Creighton University, Dr. Buesgens recently completed his internship at St. Mary's Hospital, Minneapolis.

* * *

Two Mayo Clinic staff members, Dr. Lyle A. Weed and Dr. L. B. Woolner, were awarded silver medals by the AMA for their exhibit on cancers of the mouth at the annual meeting of the AMA in San Francisco during June.

* * *

Frederick J. Tenuto (alias Leonard Durham, Leonard Durken, John Thomas Lastella, Frank Pinto, Durso Thornberry, etc.) has escaped from the state of Pennsylvania to avoid confinement after conviction for the crime of murder. He is believed to be armed and is considered dangerous. Tenuto is thirty-five years of age, 5 feet 5 inches tall, weighs 143 pounds. He is stocky in appearance, has black hair, dark brown eyes and a dark complexion. He has an imperfect tattoo, S.J., on his left forearm and an imperfect tattoo, ANA, ANNA or AMA on his right forearm, a small brown mole on his right cheek and a one-and-one-half-inch scar over the right eye. A recurring skin eruption may lead him to seek medical care. **The office of the F.B.I.** in Minneapolis, Lincoln 6963, should be notified.

* * *

Dr. Gerald E. Larson and **Dr. Raymond C. Magnuson** opened offices in Cambridge on July 12 for the practice of medicine. Both physicians are 1949 graduates of the University of Minnesota Medical School and both served their internships in Duluth.

* * *

Miss Elsie T. Berdan has been appointed chief of the Nursing Branch, Division of Hospitals, Public Health Service. Miss Berdan is a native of Sleepy Eye. She graduated from St. Mary's Hospital School of Nursing in Minneapolis and later obtained both the Bachelor of Science and Master of Science degrees in nursing education at the Catholic University of America in Washington, D. C. Prior to her present appointment she served as associate chief of the Nursing Branch in the Division of Hospitals under Miss M. Constance Long, who has resigned.

* * *

Announcement was made on July 7 that **Dr. William T. Hudspeth** would become associated with the

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If the election carries by the necessary majority, then the Board may sell the bonds and pledge as security the full faith and credit of the taxing district (the School District). At the time the bonds are issued the Board certifies a tax levy to the County Auditor to be levied during each of the years the bonds are outstanding which levy will be made automatically unless sufficient funds are on hand from other sources.

Funds derived from the collection of taxes for bonds and interest must be used only for that purpose and, should they prove to be insufficient, any other available funds must be used to meet bond payments. If necessary, additional taxes must be levied. There is no limitation on the taxes which may be levied on any taxable property based on its assessed valuation for Minnesota School Districts but the total school district taxes in any one year may not exceed an amount equal to $40 per capita of all persons residing in the District.

Taxes levied to pay principal and interest on these bonds are collected at the same time and as a part of other property taxes against all taxable property, both real and personal, in the District. These taxes have priority and come ahead of any other lien or claim on this taxable property. It is no exaggeration, therefore, for the holder of one of the School District's bonds to drive through the District, past the dairy and grain farms, past the factory and production plants in the community, along the railroad track, past the stores, bank, homes, etc., and say, "All of this property is security for my bond."

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Madison Clinic in Madison on July 14. A graduate of Cornell University, Dr. Hudspeth served his internship and a one-year residency in surgery at Syracuse University Medical Center. He then studied surgery for one year at the University of Minnesota and for two years at Swedish Hospital, Minneapolis. He served in the Army for three years.

* * *

After completing his third year of postgraduate medical study at Methodist Hospital, Dallas, Texas, **Dr. George T. Van Rooy** returned to Thief River Falls on July 3 and resumed his affiliation with the Bratrud Clinic there.

The December Clinical Session of the AMA, which was to have been held in Denver, will be held instead in Cleveland on December 5 through 8. Labor trouble in the building of the Denver Auditorium, with work stoppage, forced the change in plans. The local committee on arrangements had prepared an excellent program, which will now have to be scrapped and new committees appointed and a new program arranged.

* * *

Two additional physicians recently became associated with a Saint Paul group of roentgenologists, Drs. Schons, Medelman, Peterson and Nash, with offices at 572 Lowry Medical Arts Building and also

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Surgical Technic, Surgical Anatomy and Clinical Surgery, four weeks, starting August 7, September 11, October 9.
Personal Course in General Surgery, two weeks, starting September 25.
Surgery of Colon and Rectum, one week, starting September 11.
Esophageal Surgery, one week, starting October 16.
Breast and Thyroid Surgery, one week, starting October 2.
Thoracic Surgery, one week, starting October 9.
Gallbladder Surgery, ten hours, starting October 23.
Fractures and Traumatic Surgery, two weeks, starting October 9.
Basic Principles in General Surgery, two weeks, starting September 11.
GYNECOLOGY—Intensive Course, two weeks, starting September 25.
Vaginal Approach to Pelvic Surgery, one week, starting September 18.
OBSTETRICS—Intensive Course, two weeks, starting September 11.
MEDICINE—Intensive General Course, two weeks, starting October 2.
Gastro-enterology, two weeks, starting October 16.
Gastroscopy, two weeks, starting September 11 and October 23.
Electrocardiography and Heart Disease, four weeks, starting October 2.
DERMATOLOGY—Formal Course, two weeks, starting October 16.
Informal Clinical Course every two weeks.
UROLOGY—Intensive Course, two weeks, starting September 25.

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at 211 Midway Medical Arts Building, Saint Paul. The two new associates are **Dr. Barnard Hall** and **Dr. John B. Coleman.**

Dr. Hall, a graduate of the University of Oregon Medical School in 1942, interned at the University of Wisconsin. During his service in the Army he was associated with the Army School of Roentgenology and recently was a fellow in radiology at the University of Minnesota.

Dr. Coleman, who graduated from Northwestern University Medical School in 1943, interned at the Evanston Hospital. During his Army service he was at the Army School of Roentgenology, and from 1946 to 1949 he served a fellowship in radiology at the University of Minnesota. During the past year he has been associated with Dr. Richard Schatzki at Cambridge, Massachusetts.

* * *

Dr. and Mrs. E. P. Frisch, Willmar, sailed from New York on July 8 for a two-month trip through Europe. Dr. Frisch planned to attend the International Medical Congress in France late in July. The couple expected to return home on September 15.

* * *

Dr. Paul Carpenter, a staff member of the Oliver Clinic in Graceville, left on June 28 for Kansas City to begin a four-year residency in surgery at St. Margaret's Hospital.

* * *

The Board of Trustees and the AMA Council on Foods and Nutrition selected **Dr. Fuller Albright,** associate professor of medicine at Harvard Medical School, as the 1950 recipient of the Joseph Goldberger award in clinical nutrition.

The award was established in 1948 for the purpose of honoring physicians who have contributed importantly to the world's knowledge of nutrition. In addition, the award is made annually by the AMA to stimulate and encourage research in the field of nutrition. The award, which consists of a gold medal and $1,000 in cash, will be made at a meeting some time in the fall. The meeting site has not yet been selected.

Dr. Albright, who is connected with the Massachusetts General Hospital, received his medical degree from Harvard in 1924. He is best known for his studies of human metabolism as influenced by the endocrine glands. He studied the parathyroid glands and their influence on the body's use of calcium. He devoted most of his time to studying mineral metabolism.

* * *

The use of German physicians to help solve the medical staff shortage in Minnesota mental institutions was proposed by **Dr. S. Alan Challman,** Minneapolis, following his return from Europe early in July. Dr. Challman, who went on a sixty-day tour of Germany as a consultant to the Army Surgeon General, said that some German physicians are now assisting Americans in many Army hospitals in Germany. He stated that they would all like to come to the United States and that they probably would be of great use in our mental hospitals. "I hope to pre-

sent to Governor Youngdahl a suggestion that Minnesota might change its medical licensing regulations enough to admit these men and perhaps limit them to practice in specific hospitals," he said. Dr. Challman is a clinical associate professor in psychiatry at the University of Minnesota.

* * *

Dr. George W. Snyder, Saint Paul, director of social hygiene for the Saint Paul Department of Education, has been named a trustee of the American Legion Hospital Association of Minnesota. The association arranges for the care of needy veterans and their dependents at the Mayo Clinic.

* * *

It was announced on July 8 that **Dr. and Mrs. Howard Kaliher** had decided to leave Pelican Rapids to travel and to take up duties in foreign countries. Their main plan, it was stated, was to locate in northern India and do mission work.

* * *

Dr. and Mrs. O. T. Clagett and **Dr. and Mrs. L. M. Eaton,** Rochester, returned home on June 27 after a three-month trip through the Pacific area. During the journey the two physicians spoke before groups in several cities in Australia, New Zealand and Hawaii.

* * *

Dr. Frances King-Salmon, resident physician at Glen Lake Sanatorium, was named a fellow of the American Medical College of Chest Surgeons at a meeting of the organization in San Francisco early this summer.

* * *

Dr. Donald C. Balfour, emeritus staff member of the Mayo Clinic, was awarded an honorary fellowship in the Royal College of Surgeons of Edinburgh in June. He delivered a series of lectures at the University of Edinburgh as part of his three-month tour of European cities.

* * *

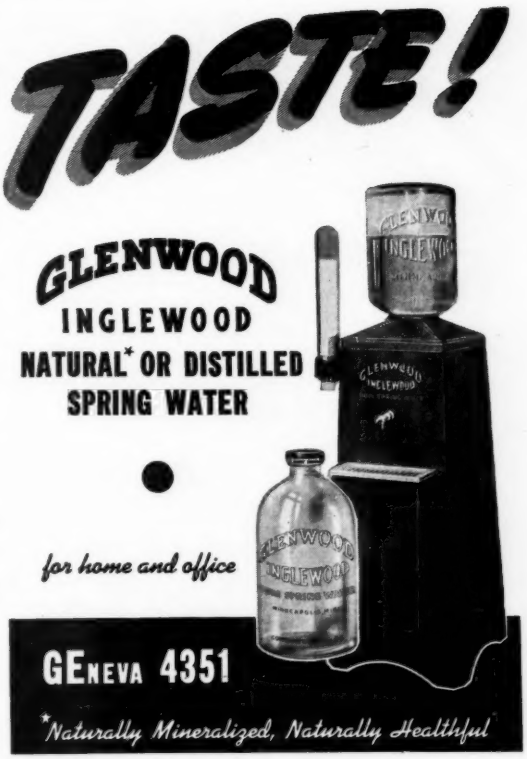
Dr. John Bussman, formerly of St. Peter, was married in Minneapolis on June 17 to Miss Muriel Koenck, formerly of Wall Lake, Iowa. A graduate of the University of Minnesota Medical School, Dr. Bussman is now completing a fellowship in pediatrics at the University.

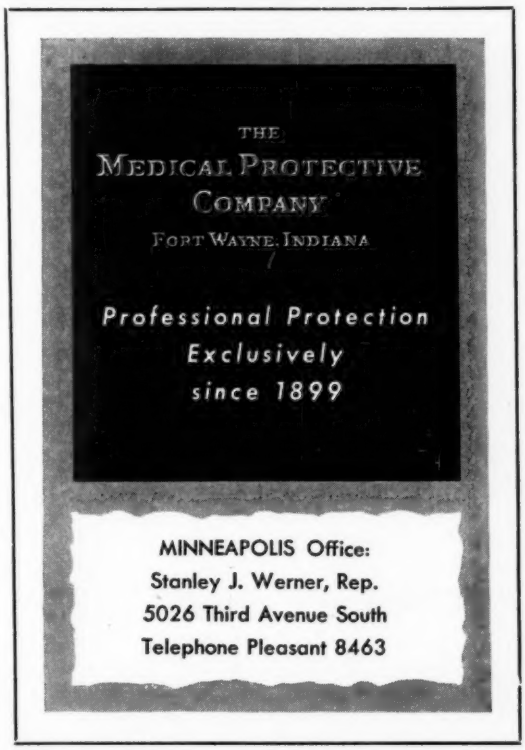
* * *

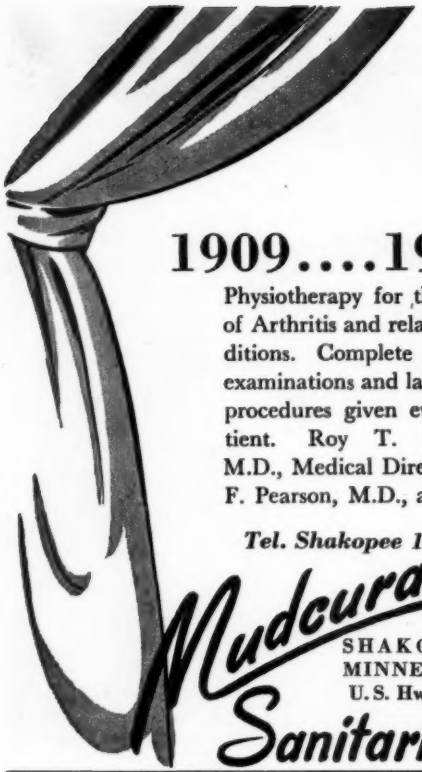
Wadena acquired a new physician when **Dr. James H. Kelly,** formerly of Saint Paul, arrived in Wadena on June 30 to become an associate of the Davis Clinic. Dr. Kelly, a graduate of the University of Minnesota Medical School, served his internship at Ancker Hospital, Saint Paul. He has completed a general residency at St. Luke's Hospital, Saint Paul, and a residency in internal medicine at Ancker Hospital.

* * *

Dr. and Mrs. L. G. Idstrom and family, of Wayzata, sailed on July 12 for an extensive tour of Europe. While in England, Dr. Idstrom planned to attend the International Radiological Congress being held in London.







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Dr. Clarence Arlander, Minneapolis, announced late in June that, beginning July 1, **Dr. Carl Olson** would be associated with him with offices at 2300 Central Avenue. A graduate of Northwestern University Medical School, Dr. Olson interned at Minneapolis General Hospital.

* * *

Dr. Alois M. Scheidel, formerly of Minneapolis, has moved to Cokato and become a staff member of the Cokato Hospital.

* * *

Public contributions to the **Minnesota Heart Association Fund** during the 1950 campaign totaled $99,649, it was announced on July 11. Of the amount, $41,000 was contributed by Hennepin County.

* * *

Dr. William A. Bessesen, Minneaolis, sailed from New York on July 13 for Buenos Aires to attend the seventh biennial assembly of the International College of Surgeons, held August 1 to 7.

* * *

Dr. Charles Slocumb, Rochester, was elected president of the American Rheumatism Association at its annual meeting in San Francisco on June 24.

* * *

Dr. Arnold A. Anderson opened offices for the practice of medicine in Hopkins on July 1. A graduate of the University of Minnesota Medical School in 1943, Dr. Anderson interned at the San Diego County Hospital, California, and then completed a residency in internal medicine there. He served in the Army from 1945 to 1947. He recently completed three years of pediatric training at the Mayo Clinic.

* * *

Four hundred persons attended a reception honoring **Dr. I. G. Davis** of Rushford on July 7. The reception, which was given by Dr. R. V. Williams, Rushford, was to pay tribute to Dr. Davis on the occasion of his retirement from active practice. Dr. Davis practiced in Rushford for thirty-one years. His practice has been taken over by Dr. M. J. Woltjen.

* * *

Dr. Henry P. Staub, Minneapolis, received a master's degree in pediatrics from the University of Minnesota in June. A graduate of the University of Illinois, Dr. Staub has been a resident of Minneapolis for ten years. For the past two years he has been studying pediatrics at University and Minneapolis General Hospitals.

* * *

Ten young physicians, all war veterans and all with University of Minnesota postgraduate training, are building a $150,000 medical clinic in **St. Louis Park** (Minneapolis).

The large, one-story, modern building is expected to be ready for occupancy in 1951. The clinic will be able to offer the services of specialists in internal medicine, surgery, obstetrics and gynecology, and otorhinolaryngology. Most laboratory procedures will be handled by technicians in the building.

The group includes Dr. Richard Webber, Dr. Arnold Anderson, Dr. Donald Freeman, Dr. Alex Barno, Dr. Robert Green, Dr. David Anderson, Dr. John LaBree, Dr. Rovert Giebink, Dr. Sewell Gordon, and Dr. Wyman Jacobson.

* * *

Dr. Ellery M. James, formerly pathologist at St. Joseph's Hospital, Saint Paul, has opened a medical laboratory at 657 Lowry Medical Arts Building, Saint Paul.

* * *

Dr. Samuel Miller has moved to Albert Lea to become radiologist at the Naeve Hospital. He recently completed a residency in radiology at the University Hospitals.

HOSPITAL NEWS

The Zumbrota Community Hospital was officially dedicated at ceremonies held on June 30. The dedicatory address was delivered by Dr. Viktor Wilson, Rochester. Open house was held at the hospital on July 2.

BLUE CROSS-BLUE SHIELD NEWS

Minnesota Blue Shield paid 4,625 claims during May, 1950 and 4,788 claims during June, 1950. The May payment totaled $189,611.93, the June payment $184,427.37. Total payments to participating doctors for May covering 4,420 claims was $179,403.50. The June total to participating doctors was 4,601 claims in the amount of $176,052.

Minnesota Blue Shield was among the seven plans adding more than 50,000 new members during the first three months of 1950 and have the second greatest increase in percentage of population enrolled. By May 31, an additional 30,774 Minnesotans had enrolled in Blue Shield making a net growth of 85,499 new subscribers in 1950 and a total enrollment of 346,000 as of May 31, 1950. The 69 member Blue Shield Medical Care Plans throughout the country reported a net growth of 975,872 new members bringing the total membership to 13,276,597; the ten non-member plans reported a net gross of 178,157 new members and a total membership of 2,106,213 making a combined membership of 15,382,810 in the 79 Medical Care Plans as of March 31, 1950.

In checking the payment during June of 1950, the bulk of payments were for cases initiated during May; however, the records still show a considerable number of cases outstanding from the last half of 1949 and also the first quarter of 1950. The Blue Shield office attempts to contact the doctors on these old unfinished cases; however, it would expedite the payment of all such cases if each doctor's office would submit a report on any and all outstanding Blue Shield claims. In so far as possible, the Blue Shield office would like to have all Blue Shield cases reported within thirty days after service is initiated. The cooperation of the doctor in sending Medical Service Report forms to this office at the earliest possible opportunity would assist in attaining this objective.

The Blue Shield office receives an ever-increasing number of calls from patients who are not quite clear as to whether or not the payment by Blue Shield has been deducted from the statement which the doctor sends to his patient. It is suggested that in so far as possible all monthly statements show the net amount payable less a credit for the Blue Shield allowance. This minor bookkeeping detail will eliminate many questions which I am sure the doctor's office receives and also give the Blue Shield subscriber a better idea as to the value of his Blue Shield on each doctor bill.

Enrollment of participating doctors with Minnesota Blue Shield totals 2,660 as of the end of June. The Minnesota Blue Shield is still attempting to attain as complete participation of the doctors with the Medical Service Plan as is possible. Any of you who have not as yet enrolled with this Voluntary Medical Care Plan are requested to do so at your earliest opportunity.

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BOOK REVIEWS

Books listed here become the property of the Ramsey, Hennepin and St. Louis County Medical Libraries when reviewed. Members, however, are urged to write reviews of any or every recent book which may be of interest to physicians.

CLINICAL APPLICATIONS OF SUGGESTION AND HYPNOSIS. William T. Heron, M.A., Ph.D. Professor of Psychology, University of Minnesota, Minneapolis. 116 pages. Price, $3.00, cloth. Springfield, Illinois: Charles C Thomas, 1950.

PRACTICAL PHYSIOLOGICAL CHEMISTRY—Twelfth Edition. By Philip B. Hawk, Ph.D., President, and Bernard L. Oser, Ph.D., Director, Food Research Laboratories, Inc., New York; and William H. Summerson, Ph.D., Associate Professor of Biochemistry, Cornell University Medical College, New York. 1323 pages. Illustrated. Price $10.00. Philadelphia: The Bakiston Company, 1947.

When an average person tries to review a book on Physiological Chemistry, he must expect to give only a general idea of the usefulness of such a book to his readers. The detailed material presented in this book is styled just as in the previous editions. Some of the newer advances in medicine are included in the material presented. Probably the newest, discussion of the isotopes as used in research when elements are tagged to determine their physiologic life in the body.

The chapter dealing with vitamins and deficiency diseases is especially good and I would suggest that it be given careful attention.

A particularly valuable discussion is that dealing with the experiments on steroid hormones.

The latter chapters deal with antibiotics which also indicates the current thought that is carried throughout the book. In general, I would say that this twelfth edition is a definite improvement over the previous ones and should be in every medical library.

JOSEPH M. RYAN, M.D.

* * *

BREAST DEFORMITIES AND THEIR REPAIR. By Jacques W. Maliniac, M.D., Clinical Professor of Plastic Reparative Surgery and Associate Attending Plastic Reparative Surgeon, New York Polyclinic Medical School and Hospital, New York City; Attending Plastic Surgeon, Sydenham Hospital; Diplomate, American Board of Plastic Surgery. 193 pages. Illus. Price, $10.00. New York: Grune & Stratton, 1950.

Written with the purpose of presenting a complete and accurate account of the present status of mammaplastic surgery, this monograph should go far towards a better understanding of the problems associated with breast deformities and to encourage their repair. In a field understood well by only a few specialists in plastic surgery, it will be an invaluable reference for those encountering these problems in every day practice.

The author has made an exhaustive study of the historical backgrounds of mammaplasty, the misconceptions as well as facts of breast anatomy and blood supply, the essential elements of repair of deformities, and the numerous procedures designed to correct them. Not only are his own techniques presented in detail but also those of other surgeons past and present who have contributed to this interesting field. Numerous detailed drawings and convincing photographs supplement the text.

This book deserves a place on the shelves of all reference libraries as well as those who attempt the surgical treatment of these deformities.

EDWARD W. SICKELS

* * *

AMUSING QUOTATIONS FOR DOCTORS AND PATIENTS. Edited by Noah D. Fabricant, M.D. 149 pages. Price $3.00. New York: Grune and Startton, Inc., 1950.

As its title indicates, this book is a collection of quotations about virtually every subject that is remotely related to medicine. The subjects run from Accidents to Youth, and include such diverse topics as Buttocks, Fees, Measles, Nurses, and Snoring. Though many of the quotations are bitter, cleverly worded attacks on the practice of medicine, most physicians should derive a

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large number of smiles and chuckles while thumbing through the book. The contents of this volume would probably be most useful to physicians who do a considerable amount of public speaking.

A few samples will illustrate, better than any review, what the book is like:

Mark Twain on the Gastrointestinal Tract: "Only presidents, editors, and people with tapeworms have the right to use the editorial 'we.'"

Henrik Ibsen on Antivisisection: "It is inexcusable for scientists to torture animals; let them make their experiments on journalists and politicians."

Ambrose Bierce on Diagnosis: "A physician's forecast of disease by the patient's pulse and purse."

George Bernard Shaw on Experts: "No man can be a pure specialist without being in the strict sense an idiot."

William Osler on the Art of Medicine: "Look wise, say nothing, and grunt."

M. A. Perlstein on Pediatricians: "Pediatricians eat because children don't."

Morris Fishbein on Tobacco: "He is an expert surgeon, brilliant pathologist, and an uncanny diagnostician, but he is somewhat rusty on advanced cigarette testimonials."

—J.H.L.

THE MERCK MANUAL OF DIAGNOSIS AND THERAPY: A SOURCE OF READY REFERENCE FOR THE PHYSICIAN. 8th ed. 1592 pages. Regular edition, $4.50; Thumb-Index edition, $5.00. Rahway, N. J.: Merck & Co., Inc., 1950.

Ten years have elapsed since a new edition of the *Merck Manual* has appeared; and, now, following extensive preparation, the eighth or Golden Anniversary, edition has been published.

The Manual needs no introduction to those who have been in practice for some time; but to the newcomer in the practice of medicine a few words of explanation may be in order. The Manual is a convenient handbook of diagnosis and treatment of a multitude of conditions in all branches of medicine and surgery.

Each disorder is briefly defined, and then follows a concise discussion of its etiology, incidence, pathology, symptoms and signs, diagnosis, prognosis and treatment. At the end of each section into which the chapters are grouped are the prescriptions most commonly used in the disorders discussed in that section.

For example, examine the section on the Ear, Nose and Throat. The material is intended primarily for the general practitioner and is a helpful aid regarding the most common ear, nose and throat conditions. In this section is presented, first, the frequent diseases of the external ear, namely, furunculosies, otomycosis, cerumen, foreign bodies, trauma, herpes zoster, impetigo contagiosa, and tumors; then, of the middle ear diseases, such as myringitis, eustachian salpingitis, otitis media and mastoiditis; and of the inner ear, including labryinthine disease and otosclerosis. Tinnitus and deafness are dealt with as far as time and space will permit.

The commonest disorders of the external nose are summarized in one paragraph with suitable cross references to other pages. Rhinosclerma is the only condition here described. As to the internal nose, conditions of the septum, i.e., deviation, ulcer and perforation, are dealt with. Rhinitis (acute, allergic, chronic and atrophic) and polyps complete the discussion on nasal passages. The paranasal sinuses with their acute and chronic disturbances are handled adequately. Nasal trauma, fractures and foreign bodies are mentioned; and epitaxis is given ample space.

Pharyngeal diseases, including tonsillitis, peritonsillar abscess, hypertrophied adenoids, acute and chronic pharyngitis, are next in order. Then, in logical sequence, follows laryngeal problems, i.e. acute and chronic laryngitis, tuberculous and luetic laryngitis and, also, the general complaint of hoarseness. Last but not least, there is a full list of common useful prescriptions for ear, nose and throat problems.

Some one hundred pages of the Manual are devoted to common procedures and routines and to such useful bits of information as the essential contents of the physician's bag, a list of alternative proprietaries, and conversion formulas. A good index facilitates the use of this handy, ready reference tool.

E. L. Bauer, M.D.

AMA DIRECTORY—Eighteenth Edition. A Register of Physicians. Edited by Frank V. Cargill. 2913 pages. Price $25.00. Chicago: American Medical Association, 1950.

The eighteenth edition of the Directory of the American Medical Association is now available after three years of work. This is the first edition since 1942. The

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long interval was caused by the war and printing difficulties.

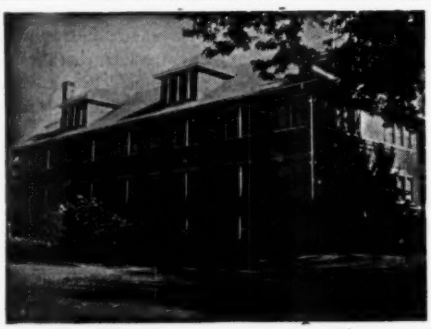
The new directory contains 2,913 pages, and lists information on 219,677 physicians in the United States, its dependencies, and Canada. It also lists American graduates and licentiates located temporarily abroad. Since the 1942 directory, thousands of changes of address have been made; 51,984 names have been added, and 28,242 names dropped from the book on account of death or for other reasons.

In the 1942 directory, the total number of physicians listed in the United States was 180,496; in the 1950 edition, the number is 201,277, or a gain of 20,781, an average yearly gain of 2,598 during the last eight years.

The Pacific States show the largest increase in physicians, the Atlantic and Great Lakes States a moderate incerase, and the West Central States the greatest losses. California leads in the number gained, with 16,688 physicians in 1950 as compared with 12,365 in 1942, a gain of 4,303. New York state shows a gain of 2,284, Texas a gain of 772, Pennsylvania 704, Florida 634 and Massachusetts 603.

For the first time, postal zone numbers appear after the residence and office addresses of physicians in cities where they are required by the Post Office Department. A new feature is the inclusion of data on the World Medical Association.

The directory costs $25. Orders can be placed by writing to Frank V. Cargill, Directory Department, American Medical Association, 535 North Dearborn St., Chicago 10, Illinois.



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MEDICAL ECONOMICS

(Continued from Page 818)

Liberty Termed "Perishable"

Believing that liberty far outshines security, if a choice is required, James A. Farley nevertheless believes that liberty and security are compatible. He states:

"We have got to get rid of the fixed idea that liberty is imperishable on our continent. If the choice is given to us of liberty *or* security, we must scorn the latter with the proper contempt of free men who know that liberty *and* security are not incompatible in the lives of honest men."

Poets, too, have carved verses dedicated to stopping the spoilage of this perishable, commodity, human liberty. For instance, the words of Walt Whitman:

"To the States or any one of them, or any city of the States, *Resist much, obey little.*
"Once unquestioning obedience, once fully enslaved,
"Once fully enslaved, no nation, state or city of this earth ever afterward resumes its liberty."

MINNESOTA ACADEMY OF MEDICINE

TREATMENT OF FRACTURES

(Continued from Page 821)

were in traction with fractures of the femur. I had one trained assistant, the other men who were helping me were gynecologists, obstetricians and pediatricians. Naturally we wished that we had the Kuntchner nails at that time because the treatment and responsibility of 187 fracture cases in traction was rather tremendous. Dr. Cole has covered this subject very thoroughly and evaluated it very properly. It is a procedure which has merit and I am very glad that he ended his presentation with one or two complications. I have seen many patients and I have seen many complications. I have seen osteomyelitis, soft tissue infection, non-union, delayed union, broken nails and nails protruding from the wound because the surgeon wasn't able to drive it within the distal fragment or remove it at the time of operation. I mention these many complications not to condemn the procedure because I agree that it is a valuable procedure; I mention them merely to emphasize the importance of fracture training. When there are emergencies and great numbers of fractures, we should be prepared with fracture teams, so that they can be treated with internal fixation without complications so that they will not require many months of bed treatment. Many phases of this problem are worthy of discussion but, because of the time, I will not continue.

Dr. Verne C. Waite, of Honolulu, Hawaii, then gave a talk (by invitation) on "General Surgical Practice in Hawaii."

The meeting was adjourned.

Wallace P. Ritchie, M.D., *Secretary*

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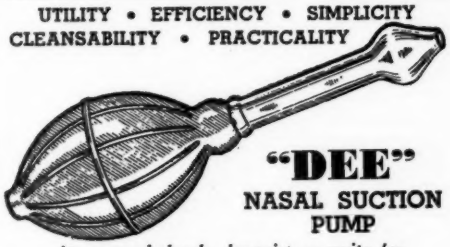

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